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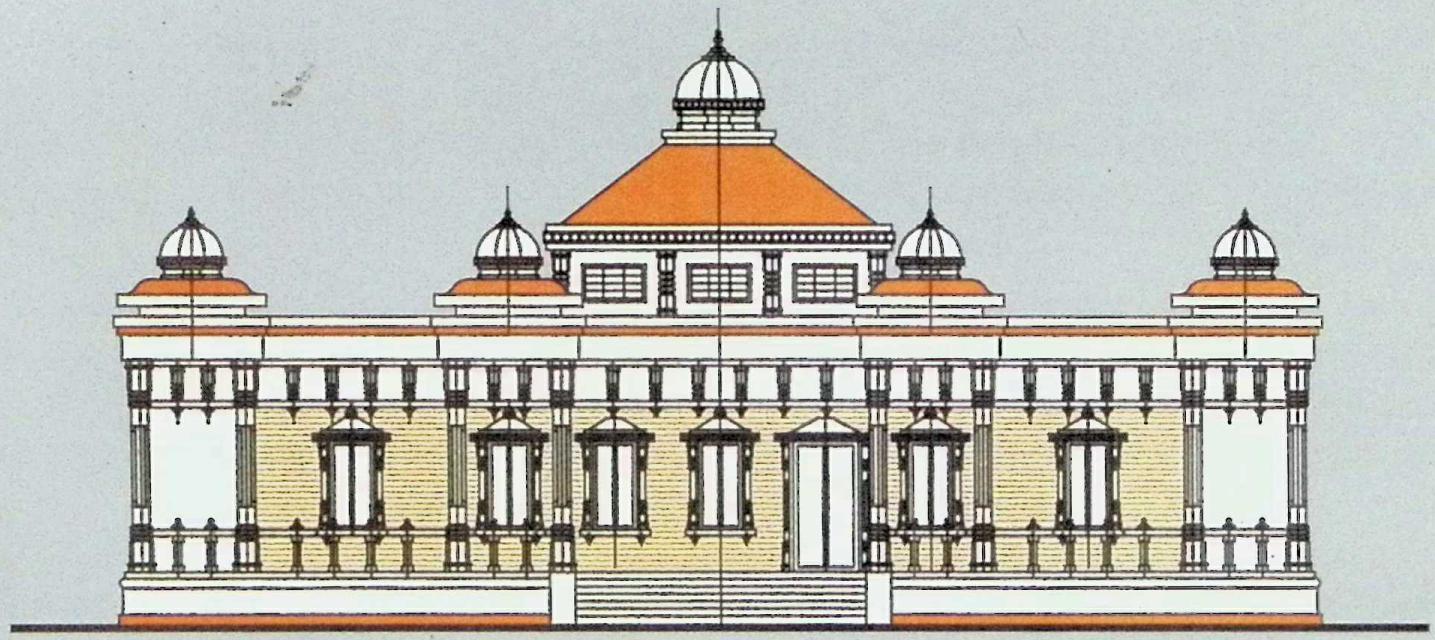
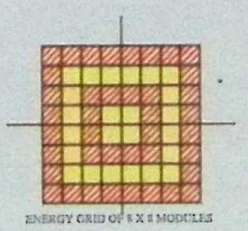
Building Architecture of

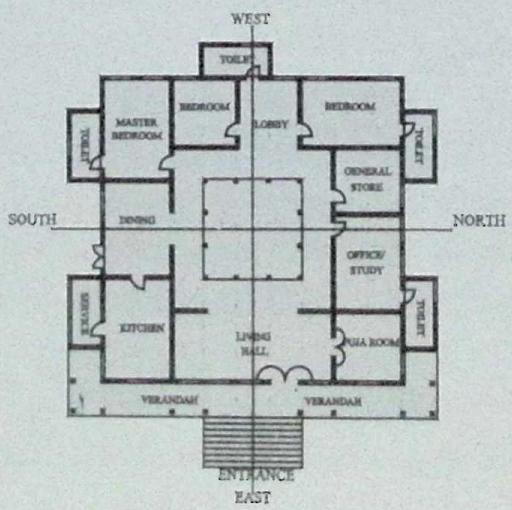
Sthāpatya Veda

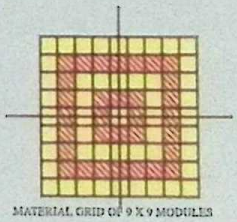
The science and technology of Vaastu Shastra - re - defined, re - interpreted and its relevance and all - time universal applicability re - established. Archetypal building forms illustrated and punctuated with apt quotations. The textual matter enriched with measured drawings. A research work of a traditional practitioner cum scholar.

Dr. V. GANAPATI STHAPATI









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Dr. V. GANAPATI STHAPATI

With respects to Swamy of Koviloor Mutt
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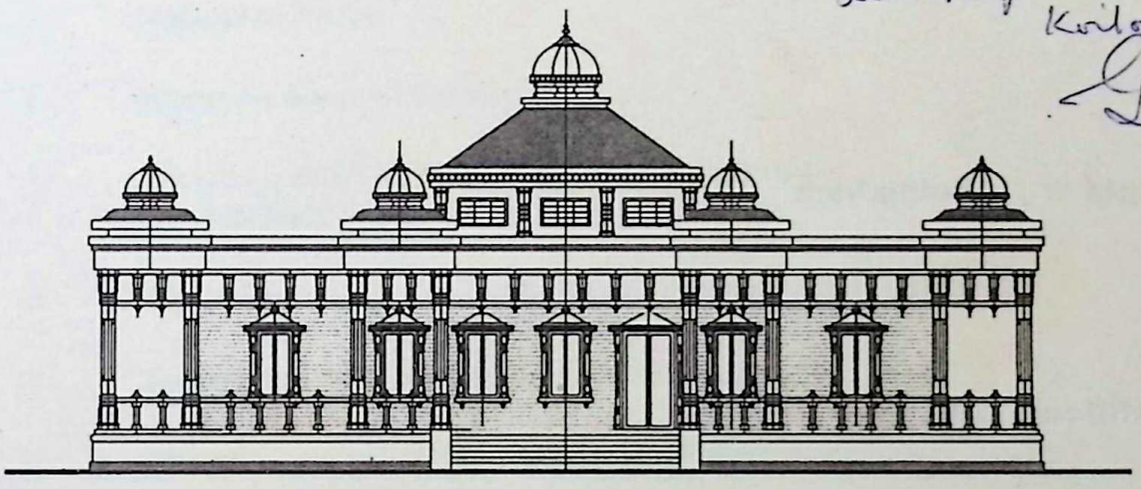

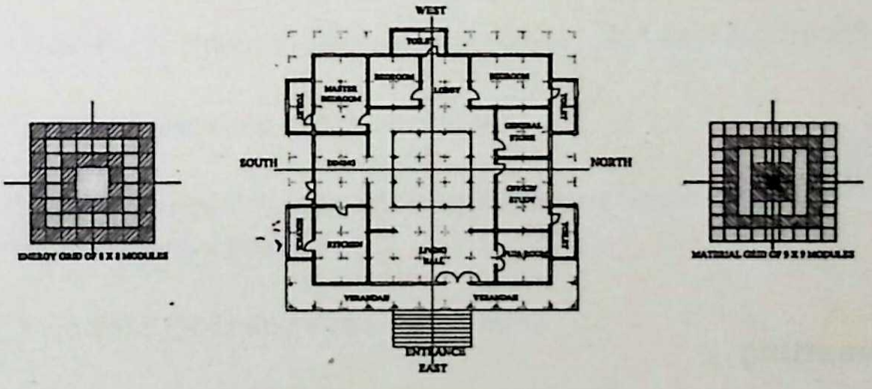

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Building Architecture of STHĀPATYA VEDA

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PUBLISHERS' NOTE

We take utmost pride and pleasure in bringing out the stupendous work of Dr.V.Ganapati Sthapati, the country's leading authority on Vaastu Shastra, titled 'Building Architecture of Sthapatya Veda'. The coining of the word Sthapatya Veda' requires special mention here since it is the earliest name of Vaastu Shastra as revealed in Bhagavatam by Veda Vyasa himself and denotes one of the five fold Vedas, held by the Sthapati's clan, the remaining four being Sabda Veda, Gandharva Veda, Natya Veda & Pranava Veda.

Going by the present trend, the word 'Vaastu' seems to be doing hot rounds inviting the attention of scholars, laymen alike. While it is quite heartening to note this trend in the contemporary world, it is equally alarming to note the mushroom growth of vaastu consultants and scholars across the country. How many of them have understood the Vaastu Shastra in its proper sense, is left to anybody's wild imagination. At this juncture, this vast treatise by Dr.Sthapati will definitely be an eye-opener into the supreme science governing the principles and practices of Vaastu Shastra, which had laid the foundation for the unique spiritual culture of India. Dr.Sthapati's research and studies on this valuable and age old tradition of Bharat have brought to lime light, its originator and expounder, Brahmarishi Mayan whose name finds mention in our legendary epics and puranas, as a versatile genius, scientist and architect.

The modern day society is struck with wonder, when they come to feel and experience the efficiency of Vaastu principles and its effects on the mental and physical environment of the indwellers. For the Vaastu consultants and practitioners, to pacify the interrogative attitude of the modern day intellects approaching them, would require, that they on the first hand appreciate and perceive the science and technology underlying the principles and practices applied in the design and construction of buildings. Unless and until, the society is made fully aware of the scientific basis of Vaastu Shastra, it is mere wastage of time and effort on the part of those Vaastu practitioners, who

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sincerely wish for revival of the authentic science and culture of Vaastu. To take up this mission, the application of the design concepts should be explained with textual quotes from authentic Vaastu texts and the technology and the science governing it should be laid out loud and clear before the interested group.

Vaastu Shastra has nowadays come to be related to the mere design principle of locating the bedroom and kitchen inside a built space and only very few think beyond this point as to what is that which brings in a spiritually alluring ambience when the built space is oriented according to Vaastu. Now comes the question of the attributes of the Space that surrounds us. Is there any relation between our inner space and the space surrounding us? If so, what is that? And how is the resonance between our inner space and built space effected by the Vaastu science? What is that which we are able to experience when we are inside a temple in front of the sanctum-sanctorum? Can we say that it is the resonance in vibration of our inner self and that of the built space of the sanctum, which in popular terms is called 'Bhakti'? Quite intriguing isn't it? Again, our ancient temples, sculptures and other structures based on Vaastu, no doubt make one stand and look at it for hours together and even see more of it. Are these features available in western culture? So, it is our Bharat, its culture and civilisation which alone is responsible for this unique spiritual science and technology and it is the duty of each and every son of Indian soil to re-establish the supremacy of our ancient tradition and culture.

In this vast treatise, Dr.Sthapati reveals the amazing world of Vaastu Shastra and goes on to explain the subtleties of Time and Space, on which the technology is based. According to Dr.Sthapati, Architecture based on Vaastu Science and Technology is the supreme achievement of mathematics and when applied on the design of structures and sculptures, it creates a rhythm in spatial form resulting in physically appealing and spiritually alluring creations on earth. One is wonderstruck, when he draws a parallel between

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such creations by man on earth and the creations of the Ultimate Creator of the universe, both following the sacred architecture.

The scientist in Dr.Sthapati has gone further deep into the attributes of the subtle energy space and has elucidated the existence of two OMs, as expounded by Mayonic Science and Technology of Vaastu Shastra. He calls them OM light and OM sound which exist as the primary source of energy of material visual forms and material aural forms in the gross world, respectively. The manifestation of energy in the subtle state to gross state is made possible by the rhythmic vibrations taking place in the subtle energetic space, which vibrations are termed as Time. Dr.Sthapati, while explicating the science of manifestation further explains that Time is the creator of all manifested objects that we see around us and perfectly draws an equation between Time and Space or Time = Space.

As Director, Vaastu Vedic Research Foundation and IIMST, Dr.Sthapati has attended more than eighty seminars in India and abroad and has conducted two International Seminars in India. The chapters in this book are but a compilation of his various lectures, talks and papers presented at various forums.

As participants in all the researches and interpretations of Mayonic Science and Technology of Vaastu by Dr.Sthapati, we have been wondering his insights into various subtleties that he brings up to the surface for scholars with scientific bent of mind to appreciate unquestionably. The chapter on 'Two Fold Oms', 'Five Fold Vedas' and 'Time and Space, Rhythm and form' deserves special mention.

There is another chapter on 'Vibration and Resonance as applied in Traditional Architecture' that would draw the interest of contemporary scientists, when the secrets of Indian architecture being superior and scientific is established with facts and interpreted in a novel way by Dr.Sthapati. As an extension of the Theory of Resonance caused by identical frequencies of sound waves to the resonance of material spaces and structures of identical

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dimensions-two.dimensional or tri-dimensional forms, Dr.Sthapati has brought to light a theory, unknown to technical scholars till date. This is a secret of symphony of various forms that go into the fabric of architectural forms of Indian origin. This ultimately bestows 'Sukha darsham' (physically appealing) as well as 'Ramyam'(spiritually satisfying) that Sthapati refers to.

We would like to invite the attention of readers to the most significant concept of Vaastu Purusha Mandala dominating all architectural design operations. This eternal truth has helped Sthapati to calculate the measure of earth's mantle without the use of any instruments. The interpretations with illustrations as presented by Dr.Sthapati, we believe, would reveal yet another wonder attributable to Mayonic Science. There is a chapter on Temple Architecture introducing the attributes of the sacred architecture as followed in the layout of temples.

Further in this treatise one would find elaborate pictorial discussions on the archetypal forms reading to architectural forms of bewitching beauty and variety. Those people who have been harping upon mistake and notion that Vaastu is concerned only with squares and square buildings would get this notion dispelled. The application of the principle of the rhythm and creation of rhythm bound forms would give rise to variety of structures, is exemplified in the illustrations appended to this volume, with good deal of discussions in the foregoing chapters.

While inviting the attention of contemporary architects and designers to such chapters, we would like to say that the present treatise contains a good number of new buildings with illustrations here and there. We believe that this treatise would secure universal appreciation and enthuse the architectural and engineering feternity to handle the design operations with confident and comforts.

We take this opportunity to heartily thank our beloved and respected Uncle Dr.V.Ganapati Sthapati and Auntie Smt.Dakshinavathi Ganapati, to have bestowed on us this privileged status of Publishers of this invaluable

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work. Through the publication of this memorable work, we sincerely hope and wish to carry on the torch of his wisdom across the world and over the generations to come.

Our thanks are also due to Dr.S.P.Sabarathinam, Professor of Vaastu and Agama, Chennai, and a long time research associate and friend of Dr.Sthapati, who have contributed two relevant articles in this book, titled 'The Auspicious and Cosmical Periods of Vaastu' and 'Vaastu Pooja and Vaastu Homa'. We are also indebted to Er.V.Ramamoorthy, the executive Director, Vaastu Vedic Research Foundation, who have all along guided us by his generous and sound advice, which have seen us through the successful execution of our duties.

We take pleasure in extending our gratitude to our computer type-setters, Mrs.R.Rajalakshmi, Mr.N.Dhanasekharan and Mr.B.Manigandan, whose efficient assistance have helped the meticulous and orderly layout of the text. Our thanks are also due to Er.R.Shanmugavelan and Ar.K.Krithika, who have enriched the book with their impressive illustration and elaborate notes there on.

- Ponni Selvanathan

- Gayathri Shanmugavelan

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Building Architecture of
STHĀPATYA VEDA

PROLOGUE

This is not a regular text book of Vaastu Shastra, nor a translation of any text on Vaastu or textual matter rendered verbatim in a book form, though I have had recourse to four great authorities on Vaastu for my discussions.

This book is actually a compendium of talks delivered by me at as many as eighty seminars, symposia and workshops on Vaastu, organised by various leading technical and research institutions in India, during the years 1994-2000.

In all my presentations, I made it a point to highlight mostly the science part of Vaastu, rather than the technological aspects. This book is no exception in this regard. I am of the firm opinion that unless the science is properly presented and intelligibly interpreted, the learned society and educators would hesitate to give the dignified place that it enjoyed in the past. Hence I have, to the best of my knowledge, experience and ability, discussed the difficult science of Vaastu, making use of English, Sanskrit and Tamil terminologies wherever need arose. As a designer and practitioner, I am clear that the mythological interpretation is not convincing even to our own scholars which fact is explicit in their interpretative works, flooding the market today.

In this little volume, I have made sincere attempt to present the science elaborately to convince the reader. I request the reader to go through patiently and deeply and try to assimilate the science,

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without which the technological treatises called Vaastu Shastras would remain inaccessible or contemptuous reminding of the fable of fox and sour grapes. Mythological interpretations would not satisfy the modern mind steeped in the benefits of Western science, technology and culture.

There has been a feeling among many that Vaastu Shastras are religious and sectarian and the practice out moded and out dated. This is absolutely wrong. The principles of Vaastu Shastra are based on a unique science of 'Energy and Matter' and 'Time and Space' - not the physical or relative time as known to modern mind but of Absolute Time - which is yet to be reached by contemporary scientists, though their achievements in the material science are tremendous and stupendous. This book will throw abundant light on the Indian science of Cosmic space and explain how that amorphous space turns into spatial forms. All objects of nature are space - born, including man.

This work of mine is addressed not only to our own technical community but also to world scientists whom, I have found to be open minded, receptive and supportive. They respect the age-old technical cum spiritual culture that India has nurtured and feels proud of. Oflate, we notice that an intense and effective waves of Vaastu is spreading fast all over the Indian sub-continent supported and benefitted only by the higher ups in society. In recent times, it is heartening to find that this interest is slowly percolating down, to other levels of society. This is also echoed in the overseas countries where the Vaastu seems to have gone very deep into the ways of life, due to independent and unprejudiced approaches and researches with the Vaastu of respective countries. So, the time is ripe enough for the people to perceive Vaastu in its true perspective through textual authority, design and execution of projects, based on the principles contained therein.

Finally I have to make a remark on my own work being presented now in the hands of the patrons, scholars and friends.

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The science of Vaastu, as already referred to, had to lie unnoticed, uninterpreted and unused during the periods of alien rules, which actually stifled its growth preventing it all along to join the main stream of nation building activities. Though the tide is in favour of Vaastu today, the practitioners' responsibility assumes added importance for its sustenance, by interpreting the science-base of the Vaastu, in the language that would be intelligible to all, especially the doubting minds.

The science of Vaastu is indeed very very difficult to comprehend, since, unlike the material science of today which is rooted in material substances and based on Lab test etc., the science of Vaastu has its roots in the Vast Space surrounding and filling the whole universe and tested by the science of sound and resonance. It is this space that dwells in all living beings including man. This science, in a nutshell, is a science of the Cosmic Space which goes into experience, vibration and turning into spatial forms of what is experienced - that is the universe and its objects. Modern scientists are not aware that there is a mathematical scale implied in Vaastu Shastra by which all tangible objects such as buildings, cities and villages are created. This scale is also extended to music, dance and poetry of classical Indian tradition. This should spread among the learned society as fast as it could, for it ensures physical and spiritual welfare of the society. Hence, in the discussion under various topics, one would find enormous overlapping, which I felt unavoidable. I trust that the repetetive mention of what is called Vaastu Purusha Mandala and its mechanics would enable the reader to get a clear picture of the manifest world. My request to the modern generation is to go through the book, more than once and internalise the scientific theories and try to apply them in actual practice. To aid understanding, certain typical sketches are appended to the text. You must be knowing that no amount of mastery over musicology would enable one to become a performer. Theory and practice should go together. In India preceptors are too many but practitioners are a handful. Let me quote here what

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the Greek Architect Vitruvius says about scholarship vis a vis, craftsmanship. **"Those who have aimed at acquiring manual skill without scholarship have never been able to reach a position of authority corresponding to their pains, while those who have relied only upon theories and scholarship were obviously hunting the shadow, not the substance. But those who have a thorough knowledge of both like men aimed at all points have the sooner attained their object and carried authority with them".**

Since this is a rare science, hidden till date, I would like to say, that for one to understand this science one should have intense 'love' to identify the truth. This is my experience. I spent numberless nights without sleep, in utter seclusion, with a lover's mind on the 'loved'. I expect from my reader, the same kind of burning love to understand the science. So terse and so sweet it is. It is a kind of Deva Darsana as remarked by Dr.S.P.Sabharathnam, a Professor of Vaastu and Agama of Madras.

Before I close, I would again request the reader to go through this Science and my discussions thereon, not once but as many times as possible till he becomes thorough with the nuances of the science and technology.

I would like to add here that the Vaastu science is a musicology of visual forms and to be a musician, good voice culture is indispensable. I mean to say that practice and theory should be mastered for proper understanding of this difficult science. Vaastu Shastra is ocean - like and the present book takes one to the shore with a request or advice to plunge oneself into the water and swim with pleasure.

In this book, I do not say that I have covered the entire gamut of Vaastu. There are countless points yet to be elaborated. On this account, I am continuing my discussion in another volume which may see the light of day in about a year's time. The particular subject dealt with here is called Griha Vaastu (Building Architecture)

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while there are three more Vaastus namely Alaya Vaastu (Temple Architecture), Yaana Vaastu (design and construction of vehicles) and Sayana Vaastu (Design and construction of furniture). Some glimpses of Temple Architecture are also covered in one of the chapters, just to arouse respect, interest and credibility of Vaastu principles. This subject will also be elaborately illustrated in the treatise, under contemplation.

Earlier, in the year 1977, a treatise on iconometry (Pratima lakshana) authored by me was published by the Government of Tamil Nadu under the aegis of Directorate of Technical Education, Chennai, during the period of my principalship in the Government College of Architecture and Sculpture, Mamallapuram. This was appreciated by the students, schloars and the press and also brought awards, being research - based comprehensive treatise on this subject. This is in Tamil. This has taken the shape of a text book on iconometry. A Telugu version of it has been brought out by Thirumal Thirupati Devasthanam, Andhra Pradesh and prescribed as text book, in the school, run by the Devasthanam.The English version of this book is in the process of printing in the Arabindo Ashram, Pondicherry.

While offering illustrations based on tradition, a few extrapolated and elaborated designs, to suit modern life styles and culture may be found to have been introduced. I am happy to say that there are a variety of specimen such as residential buildings, schools, health centres, shopping complexes, market places etc.in addition to archetypal sketches. There is a layout with elevation for a school of "Five Fold Tamil" which may be adopted by any agency, genuinely interested in the classical studies and promotion. A thorough knowledge of Vaastu science and principles are indeed necessary to draft out such areas, since architecture is concerned with harmonious blending of material spaces. I ought to have added more illustrative designs in this book but I have limited them so as to rush to the press, as this publication has suffered enormous delay, and consequent pressure put on me by my patrons and friends.

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There is also a proposal to bring out an exclusive book on measured illustrations just like the one by a professor of 'Indian Architecture', Mr. Chande Batley, F.R.I., B.A., Govt. School of Arts, Bombay and published by Taraporevala, Bombay. In this popular book one would find the 'three fold aspect' of Vaastu design namely 'bhogam' (adequacy of space for comfortable living), 'sukha darsam' (visually pleasing) and 'ramyam' (spiritually satisfying and elevating.)

It is hoped that this "Sthapatya Veda" and the science and technology discussed therein will unravel the mystery behind and throw a flood of light on its spiritual merits and relavance in today's context. It has been the dream of many an elite of the East and theWest that there should emerge a new tradition and way of life combining the best in the East and the best in the West, so that it may confer upon the human race, a life of peace and bliss while on earth. Can I say that this dream could be realised in the very near future?

The Indian religions realising this merit of Indian science and technology have fully utilised these scientific concepts and elevated the products of Sthapatya Veda to a great height of respect and regard and evolved a system of spirit-centric peaceful life for the entire human race living on the earth. Hence Indian religions are but scientific and not sectarian.

I would like to add that this treatise would reveal also the fact that Indian religions are neither blind nor lame.

I take this opportunity of expressing my thanks to the members of the Vaastu Vedic Research Foundation, Chennai, for all their encouragement and assistance for this treatise to come into being. My special thanks are due to Professor and Dr.S.P.Sabharathnam, M.A., Ph.D., and Engineer V.Ramamoorthy, B.Sc., B.E., for their advice and association with my research activities and publications.

In this context I have to introduce two new entrants into my research area, whose contributions deserve to be brought to lime

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light. They are all graduates of modern schools initiated into this difficult area of Indian science and technology. They have, in addition, attended my lectures and workshops on Vaastu and picked up enormous knowledge of this science and availed themselves of opportunities, that came to me, for implementation. They are Engineer R.Shanmugavelan, B.E., (Structural) and Architect K.Krithika, B.Arch. Being adequately equipped with Vaastu knowledge they are directly involving themselves in the design and execution of projects, based on Vaastu science, strictly traditional in concept and design as well as designs that would suit the modern way of life, ofcourse keeping them within the frame work of Vaastu. Ms.Krithika has offered computerised designs illustrating the textual matter dealt with in the present treatise. Some of their designs executed by them, find a place in the chapter on "Building designs based on Vaastu Principles". They are able to discuss and explain the principles to the clients logically and convincingly taking thus the traditional values one step forward. They also suggest remedial measures for sick buildings, with minimum alteration. The present generation going in search of a new tradition blending the old and the new will be happy to find dependable and satisfactory response to their problems. Thanks to the society that is encouraging us with many an opportunity to widen our service area.

Smt.S.Gayathri Devi, one of my research associates and Smt. S.Ponni, P.A. to Sthapati, with adequate knowledge of Vaastu science look after the publication of a research journal by name "Vaastu Purusha" through Vaastu Vedic Trust (Regd.) established in 1991. The present volume 'Sthapatya Veda' is being presented by them through 'Dakshina Publishing House' owned and run by them. Smt.Gayathri Devi is herself a prolific writer and a fluent speaker, contributing also research articles to the Vaastu Purusha journal. Smt.S.Ponni with the knowledge gained through her association with all the research activities of the Foundation helps the publications with her critical observations of the materials dealt with, so that they may reach the grass roots as well. My love go to

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them, in abundance, for all their services, with considerable interest and devotion.

I am also happy to introduce to the readers another group of technical associats who are graduate Sthapatis (designers, builders and sculptors) from the Govt. College of Architecture and Sculpture, Mamallapuram, affiliated to the University of Madras (Chennai). They have been working with me for a pretty long time, in all my projects ranging from residential buildings within India to temple buildings all over the world. The association of these younger generation with the team-spirit would, I believe, ensure development and promotion of Vaastu tradition.

The following are the designers, builders and sculptors I am referring to in the foregoing paragraph. Sthapati M.Palanisamy, B.Sc.(T.Arch.), Sthapati R.Selvanathan, B.Sc.(T.Arch.), Sthapati A.Swaminathan, B.Sc.(T.Arch.) and Sthapati S.Santhana Krishnan, B.Sc.(T.Arch.). I invoke the Higher Powers to bless all of them with, prosperous, active and happy life to serve humanity progressively in the years ahead of them.

I would like to bring to the forefront three specialists who did the Computer Type-setting work for this Publication. They are Mr.N.Dhanasekaran, Smt.R.Rajalakshmi and Mr.B.Manikandan. I express my love and gratefulness for their co-operation and good work.

I request the learned society to patronise our efforts to restore and re-anchor the scientific culture here and now and to carry on the message all over the world, in the years to come.

— Dr.V.Ganapati Sthapati

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Brahmarishi Mayan

अचिन्त्य अव्यक्त रूपाय निर्गुणाय गुणात्मने।
समस्त जगदाधार मूर्तये ब्रह्मणेनमः ॥ -मयः

பரம்பொருள் எங்கும் உண்டு பெருங்கலை யாண்டும் உண்டு
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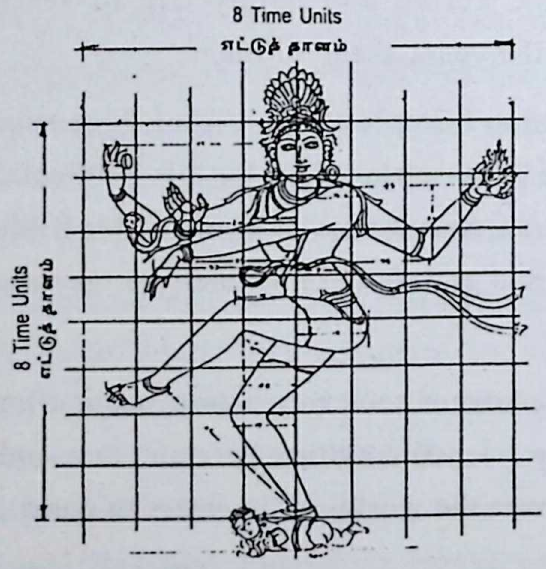
பரம்பொருள் அருளினாலே திருநடராசன் கண்டேன்
பரம்பொருள் அருளினாலே மாக்கலை படைத்தேன் காண்பீர்



VAASTU PURUSHA MANDALA
ENERGY - GRID

"Absolute Time creates life"

"Mathematics has its roots in Time"

"The vibrating element called 'Time' causes this phenomenon"

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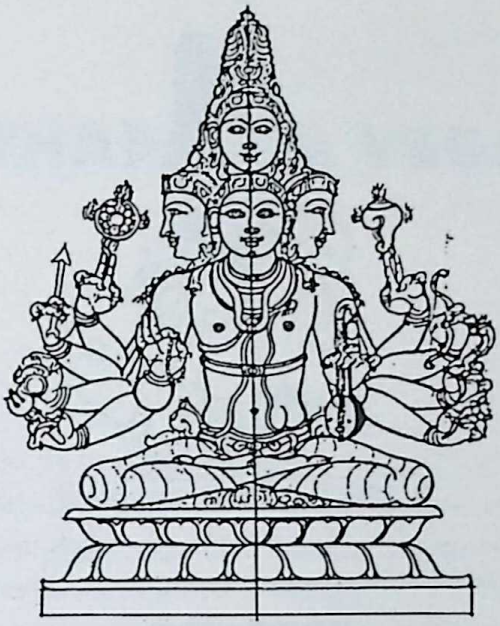

ओं विराट् विश्व ब्रह्मणे नमः

पञ्चवक्त्रं जटाभारं दश पंचविलोचनम् ।
सद्यो जाताननं श्वेतं वामदेवन्तु कृष्णकम् ।।
अघोरं रक्तवर्णंच तत्पुरुषं हरित प्रभम् ।
ईशानं श्याम वर्णंच शरीरं हेमवर्णकम् ।।
दश बाहुसमायुक्तं कर्णकुण्डल शोभितम् ।
पीतांबर धरं देवं नागयज्ञोपवीतिनम् ।।
रुद्राक्षमालाभरणं व्याघ्रचर्मोत्तरीयकम् ।
अक्षमालांच पद्मंच नागशूलपिनाकिनम् ।।
मेरुं वीणां च बाणंच शंखचक्र प्रकीर्तितम् ।
कोटि सूर्य प्रतीक्राशं सर्वजीव दयापरम् ।।
देवदेवं महादेवं विश्वकर्म जगत्गुरुम् ।।

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மங்கை பாகன்

द्वे ब्रह्मणी वेदितव्ये शब्द ब्रह्म परं च यत्।
शब्द ब्रह्मणि निष्णात : परं ब्रह्माधिगच्छति॥

Brahmam is ONE. But it manifests itself into two forms - one is Sabda Brahman and the other is Para Brahman. He who understands Sabda Brahman will alone be able to understand Para Brahman. (The first is Vāk, the aural and the second is Artha, the visual.)

Vāgartha and Padārtha are the two terminologies which signify the existence of two Primary substances, namely Sound and Light.

The light vibrates giving rise to sound space. Hence, Artha Brahman (Param Porul - Para Vastu) is the Moolam, the Primary Source material for all the visuals and aurals.

Poet Kalidāsa, invoking Pārvati and Parameswara compares them respectively with Vāk (word) and Artha (form) as in the concept of Ardha Nāreeswara - a unified entity of subtle energy and Subtle Matter.

वागर्थाविव सम्पृक्तौ वागर्थप्रति पत्तये
जगत : पितरौ वन्दे पार्वती परमेश्वरौ

The above is the keynote of Sthapatya Veda, inherited and preserved by the Sthapatis and Shilpis of Jamboo Dweepa and Bharata Varsha.

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1

STHĀPATYA VEDA

The word Vaastu Shāstra is well known today all over the world. Internet and Website facilities are a boon for the propagation of the principles and their relevance in today's context. Though this science has come down to us, from the good old shilpis as a result of the experience of generations and their experiments for centuries, this had to remain silent for the last three centuries on account of foreign rule, and due to the impact of alien cultures. Yet it is a living tradition in India, on account of its high values. It is reemerging with new fangled oars. The advancement in modern science and technology has opened up new channels of enquiry, search and adherence, and as a result, different types of mysterious energies, unseen forces etc. that surround us and within us have come into the world of research very seriously. Gross and Subtle energies are under scrutiny. One such is the energy inherent in Vaastu principles that are preserved in the sacred scriptures like Vaastu and Agama. This channel of research is widening day by day.

One section of global society rightly feels that ignorance of the existence of spiritual spaces, disorderly organisation of living spaces inside the building and lack of application along proper lines, have been the cause for majority of illnesses or sickness, stress and strain that the inhabitants of the present day houses are subjected to, all over the world.

Today we see a mushroom growth of Vaastu consultants all over the country justifying the aforesaid comment. Some are fairly satisfactory, and some others are failures. A logical and scientific solution for all problems of sick buildings is yet to come out of the lab of modern scientists. The major reason for imperfection and hesitation appears to be the language barrier and want of traditional interpretation of the science-base of technological material, that one meets with, in Vaastu treatises.

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This Vaastu being a technical subject, non-technical scholars versed in Sanskrit are not able to offer proper solution for all contradictions and confusions, now prevailing in the country. Under the circumstances, a humble attempt is being made here by a traditional practitioner known as Sthapati, in the succeeding chapters, under the title of 'Sthapatya Veda', the ancient and authentic name for Vaastu science/Vaastu Veda.

Before coming to understand and appreciate the term **Sthāpatya Veda**, it would be immensely useful to the reader to know who a Sthapati is and what the term Sthapati actually means. To be brief and precise, the word **'Sthapati'** is the title of a traditional designer, builder and sculptor. Vaastu Shastras define the term Sthapati and put him meaningfully at the highest pedestal of "Director General of Architectural Establishments".

स्थापनाधिपति : यस्मात् तस्मात् स्थपतिरुच्यते ।

— Manasara

'sthāpanādhi patihi yasmāt tasmat sthapati ruchyate!'

'He, who is empowered or entitled to do design and constructions is Sthapati.'

The same Shastra reveals him to be the one well versed in the Vedas and in all sciences, in addition to being qualified to do designing and construction of a variety of edifices.

स्थपति : स्थापनार्ह : स्यात् वेदविच्छास्त्रपारग :

— Manasara

'sthapatihi sthāpanārhaha syāt veda vichchāstra pāragaha'

'Sthapati is one who is qualified to establish buildings and also well versed in all sciences.'

आचार्य लक्षणैः युक्तः स्थपतिर्नाम धीयते

— Manasara

'āchārya lakshanaihi yuktaha sthapatirnāma dhieyate'

'Sthapati is one who is qualified to be a teacher in the subject of construction of edifices.'

Mayan, the progenitor of Vaastu tradition says

स्थपतिः स्थापनार्हः स्यात् सर्वशास्त्र-विशारदः

'sthapatihi sthapanarhaha syat sarva shāstra visāradaha'

'Sthapati is well versed in all sciences and qualified and entitled to establish buildings of all types'.

Modern scholars interpret the term 'Sthapati' as one traditionally qualified in Art and Architecture[1], but in reality it means something more and deeper than what is generally assumed. He is not merely a temple builder and image maker, as one finds him today, but a designer and

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1 'Architecture is the matrix of civilisation' - Prof. Percy Brown, author of 'Indian Architecture'."Architecture is the supreme achievement of Mathematics". 'கட்டிடக் கலையே கணக்கியல் உச்சி' 'Kattidakkalaye kanakkiyal uchchi'- Mayan, the scientist and architect of Bharat.

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builder of all kinds of habitable spaces from hut to mansion, as also a town and village-planner. He is a designer of vehicles and furniture too. All such things happened and existed before the advent of foreign rules and spread of western culture and most of them continue to exist even today. These are his contributions, too many to be enumerated and too stupendous to be narrated here, at this juncture. Many a monument have been accorded the status of 'World Heritage' under a UNESCO scheme. In fact, the material and spiritual culture of India has originated mostly from Sthāpatya Veda and spread all over India and even extended its roots and expanded its branches outside her frontiers, at one point of time in the history. These facts are being brought to society's attention today, by honest researchers of the East and the West.

Vaastu Shāstra, as seen from the traditional angle, would mean to be a treatise which deals with the science of **Brahmajnāna**[1] and technology of **Brahma srishti**[2] - the former being expressed through the science underlying Vaastu Principles and the latter, through the related technology leading into the realm of 'spirit-centric' (spiritual) creations.

In other words, a sthapati is one who has been initiated into the application of an unique mathematical formula or mathematical order which is none other than the one that is applied to the creative activities that take place in Nature. All such creations of the Sthapati are tangible, tridimensional, measurable and charged with life. They are therefore considered as living organisms. Hence, this science of creation or manifestation is glorified and elevated to the status of a Veda - the **STHĀPATYA VEDA.** In tune with this, the sthapati's concepts, designs and constructions go parallel to God's design and construction[3]. This has to

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1 Knowledge of Primal existence; 'Absolute Reality' (Vastu Brahman).

2 Creative functions of Primal existence / Primal being (Vaastu Karman) वृत्तज्ञानं रेखाज्ञानं च यः जानाति सः स्थापकः Vritta jnānam rekhājnānam cha yaha jānāti saha sthāpakaha. He who knows the science of cyclic time and sacred geometry is Sthapati.

3 Hence the Sthapati has come to be called Vishwakarma and Lord Vishwakarma (the creator of universe). Himself is addressed as Sthapati in the Vedic literature. Mayan the progenitor of Vaastu Vedic tradition was introduced by Veda Vyāsa, in Mahābhārata, as Vishwakarma and all following his tradition were called Vishwakarmas, all over India. The Jain, Buddhist and Hindu monuments were all created by these experts who do exist today as microscopic minority in various parts of India. Nobody enthuses or encourages this community even after the country has become independent. They remain out of the national main stream.

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be understood and appreciated in true perspective by those who are sceptical about the principles of Vaastu Shāstra.

Sthāpatya Veda is synonymous with Vaastu Veda. It deals with Vastu and Vaastu; meaning energy and matter. Vastu is free and unfettered energy (Purusha), whereas, Vaastu is embodied energy (Vaastu Purusha).

प्रासादादीनि वास्तूनि वस्तुत्वात् वस्तु संश्रयात्
तान्येव वस्तुरेवेति कथितं वै वस्तुविद्बुधै :

'prāsādādini Vāstuni vastutvāt
vastu samsrayāt
tānyeva vastureveti kathitam vai vastu
vid budhaihi'.

This means that "all built forms are Vaastus or embodied energies. But they are also considered and equated to Vastus since they enclose or contain Vastu, the energy". Hence they are denoted by another term **प्रासाद पुरुष**[1] 'prāsāda purusha', meaning, **'embodied energy'** or **'built space'**. The traditional designers and builders have therefore, come to be called **Vaastu Vedins** or **Sthāpatya Vedins** and their technological treatises as **Vaastu Vidya, Vaastu Shāstra** or **Vaastu Tantra**, where tantra means technology.

In this context, it may be restated that Vaastu Shastras deal with the technology of creation of living organisms in the form of residential or temple buildings since they enclose energy, called **Space**[2], the **Akasa**.

In scientific terms, it would mean that **VASTU** is **Subtle Space** and **VAASTU** is **Material Spatial form**. Vastu is subtle (sukshma) and Vaastu is gross (sthula).

It must be clear now that **Sthapatya Veda** or **Vaastu Veda** is concerned with the science and technology of form generation and form figuration and that part of the Veda which deals with technology alone is called Vaastu Shastra, meaning applied science. As such, the grammatical works that we have for language, music, dance, sculpture and architecture are all applied sciences (Shastras). All of them have a common grammatical base. Vaastu Shastra is therefore to be understood as a grammar of visual forms in as much as we have a grammar for aural forms.

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1 प्रासादं पुरुषं मत्वा पूजयेत् मन्त्रवित्तमः Looking upon the temple building (or even residential buildings) as embodied energy, the high priest should perform worship, chanting mantras - 'Shilpa Ratna' of Sri Kumara of Kerala.

2 Modern science has identified SPACE as the unified field of energy and matter (physical matter).

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In this book entitled **"Sthāpatya Veda[3]"**, the actual science and applied science concerning Vastu and Vaastu are dealt with to the extent necessary by a traditional scientist cum technologist, in popular language. The principal focus is on 'building architecture'. Recognising the sacredness of the products of this exalted and unique science, our forefathers have elevated the 'built-forms' and 'imagic forms' to the status of worship worthy objects, with great regard and reverence that they deserve. They considered them as 'divine'. Hence they are not sectarian or religious as mistakenly commented by researchers. **The imagic form of gods and goddesses as well as built forms - be it a house or a temple - are governed by the unique science of energy and matter, time and space or rhythm and form.** Hence, Sthapatya Veda has in it, the essence or end of human knowledge and wisdom, which (essence) our human community has been in search of, from time immemorial. The scientific truths are already available in plenty in our scriptures uninterpreted and it has now become the duty of every individual, whether in the East or West, to rediscover, re-interpret and re-illustrate, in a language and form intelligible to all and also present, promote and preserve them for human welfare and well being for all times to come. The aim of Vaastu Shastras, infact, is to bring physical, mental and spiritual well being for all and to fulfil various aspirations of human race. Brihat Samhita[2] of Varahamihira confirms this in the words-

वास्तु शास्त्रं प्रवक्ष्यामि लोकानां हित काम्यया।
Vāstu shāstram pravakshyāmi lokānām hita kāmyaya.

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1 ऋग्यजु : सामाथर्वाख्यान् वेदान् पूर्वादिभिर्मुखैः। शास्त्रमिज्यां स्तुतिस्तोमं प्रायश्चित्तं व्यधात्क्रमात्॥
आयुर्वेदं धनुर्वेदं गान्धर्वं वेदमात्मन :। स्थापत्यं चासृजद् वेदं क्रमात्पूर्वादिभिर्मुखैः॥
इतिहास पुराणानि पञ्चमं वेदमीश्वरः। सर्वेभ्य एव वक्त्रेभ्य : ससृजे सर्वदर्शन :॥
Veda Vyasa's Bhāgavata, makes mention of **Sthāpatya Vedam** as one of the Vedas that emerged from the land of Bharat in the remote past. It also makes mention of another Veda - **Pranava Veda** - that existed earlier to other Vedas such as Rig, Yajus, Sama, Atharvana and also Ayurveda, Dhanurveda, Gandharva Veda and Sthapatya Veda. What is further gathered from the quotation is that there were five vedas, not four or three, which we are aware of today.
"एकएव पुरा वेदः प्रणवो सर्व वाङ्मयः". Eka eva purā vedaha pranavo sarva vāngmayaha - This means that there was only one Veda called Pranava in the remote past. Shilpi tradition holds another set of five Vedas such as Sabda Veda, Gandharva Veda, Nātya Veda and Sthāpatya Veda with Pranava Veda as the primary source (இயல், இசை, நடம், கட்டிடம், பிரணவம்). There is also a traditional saying that Vedas are too many. "अनन्तो वै वेदः", 'ananto vai vedaha'.
Bharata Muni, in his Nātya Shāstra establishes that Natya is also a Veda.

2 It is an encyclopedia of cultural sciences authored by Varahamihira.

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"I expound Vaastu Shāstra for the welfare of human beings and fulfillment of their desires". Is this religious or sectarian? Is this not universal or global?

A humble attempt is made in this book by a traditional Sthapati, to remove misconceptions and misrepresentations made, over the centuries, by our own scholars and reanchor the supreme science and technology of Vaastu in the soil of its birth, as well as sprinkle the seeds all over the world.

This is the first time in the History of Art and Architecture that a Sthapati, a practitioner speaks of his own tradition, its antiquity and above all its scientific core. To date, Vaastu Shāstras have remained uncommented and are not even included in the corpus of Sanskrit or Tamil literature. Surprisingly, this is the scripture in which we see buried, the very culture and civilisation of the Indian sub-continent.

I would not say that this science suffered wanton neglect, but would say that the science is so advanced that none could comprehend it, excepting the initiated. I have to thank at this juncture, the Agamic tradition of the South which has openly expressed its acceptance of the Vaastu science in the epithet वस्तुनिश्चयं[1] (Vastu nischayam) and goes on glorifying itself and Vaastu.

This science and technology are often seen repeated in the succeeding chapters. I am forced to do so with the avowed objective of emphasizing the importance of this great science and also making it understandable by the novices through this wanton repetition.

This may not be taken as inadvertent repetition. This book may need, in addition, repetitive reading by scholars and aspirants, which would be really rewarding. If anybody could write to the author, a word of appreciation, he would feel that his dream of unravelling the mystery that shrouds the Sthāpatya tradition, is realised.

The author of this treatise, has participated in as many as 80 seminars on 'Scientific Vaastu', himself having conducted two International meets on Vaastu, one in Chennai, Tamil Nadu in the year 1993 and another at Thiruvananthapuram,

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[1] It means that Vastu is 'existence'. It means also that Vastu which Āgama Shāstra believes and sure of (Vastu) as the ultimate substance of the universe.

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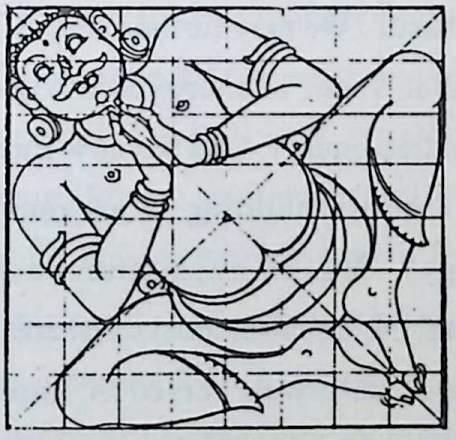
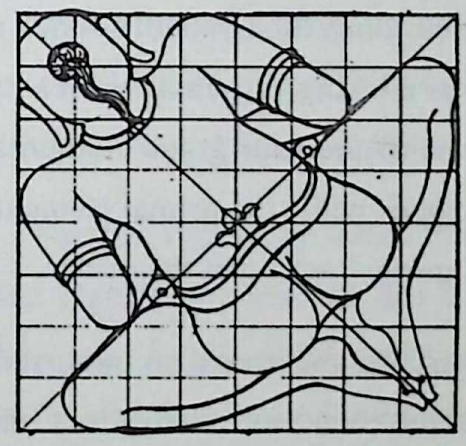
Kerala in 1997. He is also conducting workshops on Vaastu where engineers and architects are invited and initiated into the knowledge and wisdom of Sthāpatya Veda. Practical training in Vaastu - designing is also introduced in the workshop-curriculum and is collected together and presented in the shape of lectures under various titles in this treatise. **This is not a text book in the real sense of the term. But modern engineers and architects with field experience would find this treatise closer to a text book or a good guide.** The treatment of the science and technological principles is made in very simple English with Sanskrit and Tamil terminologies followed by explanations. There will be no need to approach any individual to have further enlightenment or seek further light on any point, at any context. One will find that in all the chapters, the science is highlighted mainly for the reason that **in the Indian tradition, technology is constructed on science and not on technology, the science.** The present generation of architects have been in quest of a new tradition where energy (spiritual) and matter (material) would get unified for the well-being of human race. May the **Higher Powers** bless the readers and the adherents with peace and bliss, while on Earth.





VAASTU PURUSHA

The science of Vaastu Shastra hinges on these pictures of Vaastu Purusha

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2

CENTRAL THEME OF STHĀPATYA VEDA

House buildings or temple buildings are embodied energies - Enclosed space is a living organism - A building enclosing the space is surcharged with eight elemental forces, the quintessence of which is VASTU and it is VAASTU when it takes material form - The elaboration is discussed underneath.

To put it in a nutshell, the most important point that I have brought to light during my lectures and workshops is that a house building, though built of brick and mortar is a living organism with active functions of the four gross elements at corner zones while the primal element of space (energy) acting at the centre.

Further, the space so enclosed is packed with three more elements at subtle level namely, sound, light and pulse. These are the eight elements that every animate being is composed of. This unified substance is the root or moolam. This is denoted by the terminology 'Vastu', the quintessence and that material form which contains all the eight attributes is termed as 'Vaastu'. We may further simplify and say that Vastu is energy and Vaastu is embodied energy. Can we now interpret that a house building is an embodied energy? Yes, so says Brahma Rishi Mayan, the super scientist of Bharat, born of Tamil soil, well versed in Tamil and Prakrit - the twin languages of Jambu Dweepa, the original home of human race.

The following are his words as found in Mayamata Vastu Shastra;

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प्रसादादीनि वास्तूनि वस्तुत्वाद् वस्तुसंश्रयात् ।
तान्येव वस्तुरेवेति कथितं वै वस्तुविद् बुधै : ।।

Prasādā deeni vāstuni vastutvād Vastu samsrayāt

Tānyeva vastureveti kathitam vai vastuvid bhudhaihi.

All buildings are Vaastus (embodied energies) since they are enclosed or associated with Vastu (the energy). The enlightened people so remark about Vastu and further say that Vastu and Vaastu are not different from each other. It is Vastu that metamorphoses into Vaastu. This is the central theme of Sthapatya Veda and the applied science of Sthapatya Veda is termed as Vaastu shastra.

Hence it is clear that the luminous space is the source of all animate objects of the world. This universe is called by Jagadguru Mayan, in Tamil, 'ஒளி வெளி' Oli Veli, which expression is found occurring in his சிற்பமாச்செந்நூல் Sirpamachennool that originated during Sangam days. The Mayonic statement is "அண்ட மூலமாய் பிண்ட மூலமாய்க் கொண்டிலங்கு ஒளிவெளியென" meaning that it is 'the luminous space that happens to be the root of the universe and all objects suspended therein. In other words all animate objects have their source in space'.

This Veli is called **akasa** in Sanskrit, meaning energetic and dynamic space.In Indian tradition, the totality of the eight elements - Pulse, Sound and Light and the five gross elements of Space, Air, Fire, Water and Earth - is the Supreme Energy called by various names such as Vastu, Brahman, Moolam, Root, Energy, Viswa Brahman, Atman, Paramatman, Purushan, Parama Purushan, Para Brahman, unified substance of energy and matter or even subtle matter (Para Vastu) and as God/ கடவுள் Kadavul by one and all in general.

It can be said that an enclosed space or embodied spatial form or simply a building acts as a living organism.

Further, it must be noted that each of the eight elements has got its own quality, just like heat as the quality of fire. These qualities are found to cause subtle effects on human system, adversely or favourably. These gunas become gross attributes of Space which none can

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escape. To understand these gunas and adjust our way of life to be in harmony with them has become the paramount objective of Sthapatya Veda. This has to be achieved making use of material things available on the earth. This aspect is elaborated technologically in Vaastu Shastras, under the topic **Vaastu Purusha Mandala** and the effect of the gunas on human psyche under the chapter on Phalasruti in this treatise.

So, it may be concluded that a building is not a shelter but a vibrant structure surcharged with energies of various qualities.

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3

VĀSTU SHĀSTRA

- A SCIENTIFIC TREATISE -
NOT A RELIGIOUS DOCUMENT -

Vaastu and Āgama are two cultural sciences that have been in vogue in the land of Bharat from very ancient times - They are living traditions - Vaastu Shāstra is an advanced science, rendered in technological language - God forms, temple structures, residential buildings and village and town planning are all based on science - They are all governed by a mathematical order not according to whims and fancies - They follow the laws of Nature - Art and architecture are spiritual not religious or sectarian - Indian poetry, music, dance, sculpture and architecture are an exceptional group of sciences based on the science of 'Energy and Matter' and 'Time and Space' - Vaastu science has gone beyond the frontiers of material sciences - The uniqueness of Indian or Eastern science lies hidden paritcularly in the concept of Time and Space, Spaces and Spatial forms - The concept of spirit and spiritual experiences of bliss and peace, material prosperity and physical welfare are interpreted scientifically by none so far - The mathematical base is yet to be revealed - None is aware of this, not even inferred - Superficial knowledge and scholarly criticisms are pointed out and misconceptions eschewed from the mind of the society in the succeeding pages - It is not the physical science that we learn in the colleges but is a spiritual science of manifestation and architecture is an extension of this great concept - To enable human race to live in harmony not only with gross nature (matter) but also with subtle nature (energy) as well, is the aim of Indian Art and Architecture - This aspect of Vaastu science is repeatedly focussed on in many a context in this Sthapati's treatise. Vaastu is re-defined, re-interpreted and illustrated in popular language for the first time in the history.

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The unique contribution of Indian shilpis, the traditional architects and engineers are dealt with elaborately in this volume. Their contribution to Indian culture is fundamental, original, and most valuable. The most misunderstood and misconstrued are the works of traditional designers and builders. Western minded Indians marginalize the Vaastu principles and building patterns under the false impression that they are religious and sectarian. Aesthetical patterns, have, therefore, gone beyond their understanding with the result they do not apply in their designs. In today's context what is actually to be done is that, the best of western concepts or patterns should be internalized and reproduced in Indian metaphor just as a western musical instrument the mandalam is so handled as to produce Karnatic tunes. All contemporary designs of Indian architecture are western with no grammatical base or relationship to Indian way of life. They speak of gross ecology unconsciously ignoring the spiritual ecological environment resulting in the creation of unbalanced physical and spiritual environments. In this treatise the science underlying technological and ecological concepts and applications are dealt with from an angle, intelligible to modern minds.

This is the first time that a shilpi speaks - To read and to re-read this interpretation of a shilpi is solicited, as the science, dealt with here, is too deep and too exalted and beyond easy comprehension - It establishes and reconfirms Prof. Einstein's theory[1] that $E = mc^2$ from the stand point of traditional knowledge and wisdom of Vaastu Shāstras - Vaastu is equated to Vastu. Matter and Energy are interconvertibles, $mc^2 = E$ and $E = mc^2$. This is the end of knowledge which is interpreted and applied in Vaastu Shāstra for human welfare and well-being, not for human destruction or annihilation. The Indian Vaastu science has established on earth a parallel world of peace and bliss - Hence called Sthāpatya Veda[2], the Veda that deals with peaceful establishments on earth.

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1 Details are given in a separate chapter.

2 Science of designs and constructions. This is a part of PRANAVA VEDA, handed down by Maya who was adored as Brahmarishi in Sanskrit literature and Māmuni (மாமுனி) or Mayamuni (மயமுனி) in Tamil.

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Some glimpses of the scholars' opinions on the Vaastu Science and Vaastu Technologies

The scholars of the world, I would like to say at the outset, have almost exhausted every science of the East that caused the emergence and development of culture and civilisation right from the Vedas down to the present day works. Similarly, archaeologists and historians of the world have made an extensive and intensive search into the monuments and artifacts, through visual studies, as well as documentation and laboratorical analysis. Inspite of enormous researches they have been conducted, it may be observed, that it is incomplete in the sense that, they have neither pinpointed the antiquity of the culture nor the essence of the cultural sciences that our forefathers had been aware of, explained logically and convincingly. Their studies have always been superficial and physical because they are not aware of the existence of a unique science underlying the culture of the East, particularly of the Indian subcontinent. This science, in fact, starts from the upper limits of and lies beyond the physical sciences with which the modern world is conversant. The source of the sciences or their anchorage is yet to be known to the East and the West, merely because the rock-bottom and the crest of the traditional sciences are remaining invisible to the searching eyes. The story of the failure of Brahma (the four headed) and the Vishnu (the four handed) to reach the crown and the foot of the thread of a 'flame' that appeared before them, be single word speaks of the end of the human endeavour and research into the core of our culture. Of course, in one sense, Indian culture is unintelligible and unidentifiable. Yet, it was possible for the men of pre-vedic days to identify and quantify the unlimited into a limited entity, by observing and analysing the visual and aural forms that we produce in day-to-day life. It was indeed a self enquiry focussed on the inner phenomena and replication of the inner experience into the outer world of reality.

The results of the excavation, examination and assimilation of the dynamics of the inner and outer universe, carried out during the prevedic days, are recorded in our Vedas in the shape of mantras and sutras and also recorded in terms of numerical interpretation and visual representation into building forms

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as well as imagic forms in Vaastu Shastras. Not only are they presented to us in visual forms, but are reproduced in aural forms as well. They are immortalised in other scriptures, like Agama.

In the corpus of technical literature, there are two sciences that have not been fully understood nor their roots identified. On the contrary they are branded by ignorants as superstitious and irrelevant in modern context. Inspite of repeated searches, (still the search is going on) the source of all this knowledge and wisdom is escaping their grasp. This is because, the technologists handling the secretive sciences have not been approached by contemporary researchers with a mind, free from complexes. What I mean to say is that the actual makers of the civilisation as well as makers of the culture are invariably ignored or looked at with scant respect while those who are well versed in the languages in which these sciences are expressed are alone approached and their interpretations listened to. I would like to say openly that this is something beyond language skill. The language has its limitations in the interpretation of the technological aspects of performing arts, on which this science is based. When language fails, our hands have to take up the role and articulate in visual terms. The spirit of the language of forms is the spirit of our culture. The spirit or spiritual experience associated with the traditional sciences, is something that reveals itself only to the practitioners. A practitioner of this group of sciences can respond to the call of another practitioner of the same group. This is because the spirit itself is a practitioner, a performing artist.

There are two sciences under this category that have not been properly studied nor convincingly interpreted. Their substantial contribution to the culture and civilisation, has not been frankly acknowledged and honoured. I would like to draw the attention of the Engineers and Architects as well as the Scholars, that the two sciences that I have been keeping in mind are the sciences of Vaastu and Agama. They are the twin sciences of Bharat with their antiquity and origin still remaining shrouded in mystery. This is because the original works were out of reach. Some of them are now available, though the technical scholars are not introduced to the original treatises now unearthed. Yet they live and are going to live in the years to come. The values of

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the sciences are so infallible that they are bound to be accepted at global level, even though of oriental origin. Today, it is not exaggeration to say that, the focus of the world is on Vaastu.

I hope that an unprejudiced, unbiased, non sectarian and non - racial approach to these sciences would very soon reveal the essence of the two practical sciences, that have been lying dormant, though still dominant in the South, over the centuries, contributing enormously to the continuance of the material and spiritual culture of the people of India. Again, I have to say, that what is disturbing in this context, is the "rasika" or the consumer is mistaken for the producer. This is so because, unlike elsewhere, the technology in India, has not paved the way for the emergence of science but it is the science that has paved the way for the evolution of technology. It may be theorised that it is not "Lakshya" (இலக்கியம்) or the epic that paved the way for the emergence of "Lakshana" (இலக்கணம்) or grammar but it is "Lakshana" from which "Lakshya" is evolved. This is Indian culture. The problem of approach to Indian culture should be viewed and tackled from this angle. Otherwise, we would continue to grope in the dark.

Of the two sciences mentioned above, the agamic science, has received scholarly search and comments. But in this context the essence of the science has not been realised by the scholars. It is despised and dismissed as sectarian, religious and something personal. According to Dr.S.P. Sabharathinam, an eminent scholar in the line of Agamikas and a practitioner in the agamic tradition the basic science, where the Agamas are anchored, is not brought to light by any of the scholars who went into the texts. In short, he adds that the researchers read the texts but not the spirit. He also feels that mere proficiency in the language in which it is written, is not enough to understand the science and nuances of this technical tradition. He says that the scholarly interpretations are peripheral, not at all coming to the centre of consciousness of agamic lore. Further, he says conclusively, that as in the case of Vaastu, the Agamas are also technical and practical in their approach. Also, he says with open mind, that the language of Sanskrit employed to convey deeper values is separate from that of literary Sanskrit. It is again technical, factual and not literary or poetical. There is no element of

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exaggeration as in the case of Vaastu Sanskrit, which is technological and scientific.

Similarly, the translations and interpretations of the Vaastu texts by non technical scholars are very shallow and peripheral. However, it is very encouraging to find out, at the same time, that the approach of the technical scholars are satisfactory to some extent. They deal, of course, with physical problems, being practitioners, wanting to apply them in the design process with immediate effect. This is because today's society is much changed and the demand for the application of Vaastu principles is mounting high. But invariably, the technical and non-technical scholars did not question to themselves as to why in this tradition, the residential structures, temple buildings and imagic forms are much different from the products of their counterparts in the world and how these are able to bring peace and prosperity to the dwellers, as asserted by the traditional sciences. In the same way, they do not even question why music and dance as also the poetry of Indian origin, are all far from their own traditional patterns and how they are able to enkindle ineffable joy and peace. Once upon a time the critical observations of Mamallapuram - sculptures by the historians of the West were something most unfair and snobbish. They said they are barbarous sculptures, though they appreciated the technological aspects and commended them as unique and wonderful. Today the opinion is reversed because, the artists of the West look at them from a different angle. According to them, they are sculptures unsurpassed and matchless. The sculptures revealed themselves differently to them. This is because, they go into the feeling - base, rather than into the material or physical representations.

Man, with an atom of divine energy in him, has established his own spiritual domain on earth, rendering his own forms much more attractive than those of his own Creator - the Creator of the universe. God made man, the animate being - but man has made the Supreme Being, his God, using the same technology of the divine master. Hence, it is sacred and hence the science is designated as Sthapatya Veda. Therefore, if one could find a logical or reasonable answer to such variations and comments thereon, then he would reach the very essence of the

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unique science on which their respective technological treatises (Vaastu - Shastras) are based.

I have been repeatedly saying in all the seminars, I have participated during the year 1995, and thereafter that there are five individual disciplines with a common science - base. They have been enjoying justifiably the status of individual Vedas and on that account the shilpi tradition has designated them as pentadic group of sciences. They are as detailed below :

1. Sabda Vedam	—	**இயல்** **Eyal**
2. Gandharva Vedam	—	**இசை** **Esai**
3. Natya Vedam	—	**நடம்** **Natam**
4. Sthapatya Vedam	—	**கட்டிடம்** **Kattidam**
5. Pranava Vedam	—	**பிரணவம்** **Pranavam**

The traditional shilpis of Tamilnadu hold these five branches of Veda as Pancha Marabu (ஐந்தியல் Aintiyal), meaning pentadic tradition. This is because, as observed earlier, all the five traditions have got a common science - base and that basic science is called the science of 'Time' and 'Space' as also 'Rhythm and Form'. Therefore, sometimes, I used to describe this group as Vedas in action and sometimes as Upayoga Vedas (Vedas in use) not Upa Vedas. The wisdom of such a unique science had remained over the centuries, only with the traditional practitioners, who paid more attention on technological practices and expressions rather than on the propagation of the science itself. The result has been that this science had to remain secluded. This is analogous to a modern medical doctor, who only prescribes medicine not explaining how the medicine is prepared. Further, this being a line of hereditary profession and livelihood for them, they devoted their time mostly on the creative endeavour rather than along propagative channels. I believe that this has been the case with all the traditional practitioners whether they belong to the disciplines of poetry, dance, or music. To this status, their answer is that it is an affair well settled longback and socially recognised as well. But here also the actual science-base lies deeply buried. They also experience and elicit responses but do not articulate the

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logic behind the response. But fortunately, the facts of science, though not openly discussed in the technological treatises, are identified in various principles and codes that the shastras deal with, in a mythological language under a unique numerical and mathematical system.

This science is particularly implied in all the numerical measures and structural details presented in the Vaastu texts. **In this tradition, the inherent uniqueness is that, numbers are abstractions of forms and forms are pictorial expression of qualities of nature expressed through visual and aural channels.** Only very recently a kind of flutter is noticeable among the practitioners, to articulate their internal experiences.

There was a time when these traditional artists were looked down upon by our own society. On that account their professional status, career, ethics and everything connected to their activities had suffered miserable set back. Now these creative geniuses are coming back to the forefront with their achievements appearing in the lime light. Further the line drawn by our own people between the moderns and the traditionals is collapsing, of late, due to the efforts of a section of the contemporary community of engineers and architects to understand and apply the traditional principles of Vaastu.

Only at this stage, certain scholars of today have expressed opinions of different shades on this popular Vaastu tradition and Vaastu technologists as well. I have enumerated over the discussions hereunder certain sharp comments of the critics, for the general knowledge of other scholars and government bodies. I have added my own from the traditionalists' point of view.

Conflicting views on the Ancient Indian Science of Vaastu

The Science and Technology lying behind the Vaastu Shilpa tradition is one of the most neglected subjects, though it is generally known that the contribution of this tradition towards the evolution of Indian civilisation and culture is not only substantial, but exceptional in many respects. Hence this subject is indispensable, rather, I would say, that it is the demand of the day as other wise, we would be branded, by the contemporary generation, as backward, superstitious and utterly speculative. The

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critics of our culture both in India and abroad, comment that our culture is not based on any science or technology, and whatever we speak of today as indigenous science, is only experiential, and not experimental. I would be showing, to the best of my knowledge and ability that the science we have originated and developed in Bharat is very unique and much different from that of the West. Though spiritual, it is experimental too.

Mystery shrouding Vaastu Shilpa Tradition

Before taking up the subject proper, I would like to submit before the learned readers certain conceptions or misconceptions that have accrued over the centuries on the traditional science and technology, around which something like a fort of mystery has developed. As a builder and rebuilder, I have been trying to dismantle this structure of misconception, causing no injury to any one and on any account. The aim is to see the foundation, examine the materials used for the footings, analyse the structural components, and rebuild it into an agreeable and usable edifice, which would also be visually pleasing and spiritually satisfying. What are those conceptions and misconceptions referred to above? They are too many to be enumerated here. Let me focus your attention on few of the important ones held or collected and presented by great scholars associated with the research on ancient science and technology of Indian origin.

Science and Technology of the West and the East: our contribution?

We are in the days of advanced Science and Technology. These are days of perpetual talk and prolonged admiration on the rapid growth of Science and Technology taking place in the West. Truthfully speaking, there has been a good number of marvellous achievements and rapid advancements in today's Science. Enormous encomium is showered on the West. No doubt, they richly deserve all our admiration. But what is our position today as an independent sovereign nation in this context? In this connection, too many questions are raised and too many contradictory remarks are made. Do we know that India had a glorious scientific and technological tradition in the past? If yes, what is that and why did India, not develop her own science? Why should

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India depend on or borrow everything from the West? These are questions raised today. When we take a look at the past, we look highly sophisticated and really civilized. How did this come about? Wherefrom? These are another set of questions, heard in the public forums.

Contemporary Search into the Science of the East

Affected by the Western trends in the scientific and technological field, moved by the questions as stated above, and prompted by patriotic fervour, I am very happy to point out here, that there have emerged today, a galaxy of contemporary scholars devoted to the study of the origin, nature and development of Science and Technology that existed in the old India. This is their journey of identification of reality. They are now on their feet to delve deep into the spirit of our scientific heritage and to prove its relevance in the modern context in the very near future. But the guides to their search are in short supply today, as one interested scholar and architect remarked. The glorious traditions of Science and Technology, nurtured by our society in the past, have today shrunk into village crafts and cottage industries. Even here, there is production but not improvement in technology. It is indeed a miserable fall of the traditions from the pinnacle of their supremacy.

Another set of contradictory views

Some of them with western bent of mind say, that the origin and development of Science are Euro-centric. There was no science at all in India, they say. On the contrary there are certain other scholars who say, after comparative study, that upto the 12th century AD, our Bharat was enjoying a kind of leadership in the field of Science and Technology and only thereafter and that too during the alien rule, it has lost its identity, forcing us to depend solely upon the West for all scientific knowledge and technological expertise. They also speak about the impact or infliction that they have caused on the Indian economic, social and cultural life. They say that our simple, contented and peaceful life is very much disturbed or paralysed by this impact. The life has become too complex and expensive. Life has become too mechanical and it looks very difficult to escape from the complexities and dry routines. With this, I would like to add that the spirituality permeating phase of our earthly life has

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been distorted and the values have drifted away. Is it really possible to bring back to life, the spiritual aspect of our culture? Is it really worth restoration? These are another set of questions asked today. Let us keep these in mind and move further into the subject proper.

A Living Tradition - An elderly view

In between, here and there, we find our own old scholars well versed in the linguistics and scriptures trying to identify a kind of Indian origin to the scientific and spiritual culture that we had in the past. They, after prolonged and protracted research, also project a view that it is from India that the Science must have gone to the East and the West, along land-routes and sea-routes and not from the West to the East as is popularly construed. The spiritual culture that had germinated in the Indian soil had spread its branches all over the world once upon a time, though we see only the remnants of the past today. Still it is a living tradition, they say. They hope and strive hard to restore it before long.

Vaastu Shastra, A Religious Document - Contemporary View

Another section of modern scholars of Indian origin hold these views as archaic and sometimes parochial and chauvinistic without realizing that reflections on one's own past achievements is a pre-requisite for resurgence, revival, renewed effort, and for developing a vision of the future. The generality of our traditional scholars say, that our Science and Technology are indigenous and language-centric. Another view is that the Indian Science is religious and served only religion. They add to say that the Vaastu Shastras are only religious documents. Still others, on this account, advocate suppression of such documents saying that they impede free growth and advancement. One Prof.A.Rahman, a scholar of great repute of NISTADS, (National Institute of Science, Technology and Developmental Studies) says that "the scholars of one language have therefore, tended to consider the Indian tradition as one which is associated with one language and religion, to the exclusion of the rest". This statement also calls for indepth examination, by the contemporary scholars. There is truth in it, as far as I know, we the shilpis, are the actual sufferers on account of this factual blemish.

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Significance of Indian Science and Technology - Not fully realized.

At another place the scholar says, "Science and Technology in Asian culture area, as a result of colonisation, were cut off from earlier indigenous developments and are hitched to European Science and Technology". Further he says, "Indian Civilization and Culture, like any other, had scientific methods and technical base". This has not been fully understood. Besides, some very generalised ideals which are either apologetic or chauvinistic, have held the scene for long. Hardly any studies have been carried out on the nature of Science and Technology and their various linkages to society. Further, the nature of changes in different periods of Indian history and different regions of the country have also not been understood, nor their significance fully realized".

NISTAD's Researches

At this juncture, I would like to turn your attention to the existence of a very eminent body of scholars and scientists functioning under the aegis of the Government of India, known as NISTADS. This institute has approached the problem of indigenous Science and Technology from the view point of a historian - the history of the origin and development of science and technology in India, as a first step. They are yet to focus their attention on the identity of Indian Science and Technology. Yet on account of NISTADS' efforts, we have today a number of research papers brought out in a beautiful volume for all of us to read and examine.

The papers are very informative and illuminating. From that volume of research papers it is evident that the NISTADS have a number of programmes that would hopefully throw further light on the indigenous tradition of Science and Technology. With due regards and respects to what they have disclosed in that volume, I would like to record my own humble impression, that none of the papers have been able to touch the centre of consciousness of our culture, both scientific and religious. What I mean here is that, the intrinsic quality of the indigenous Science and Technology is not realised. In other words the question is this. What is the area of anchorage of our ancient science? I would be revealing to you what it is, at the fag end of my article, and while referring to other points, some glimpses would also be available. I am

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now presenting only the different view points that are relevant and prevalent today in the research field.

Sacred Architecture and Sacred Geometry

Another band of scholars, emanating from the contemporary architectural profession, with western lenience and western method of approach, are going deep into the aspect of structural analysis. They examine the layouts and various components and constituent parts that have gone into the fabrication of ancient buildings such as temples, palaces, mansions, house-buildings, forts, granaries, tanks, wells and other artefacts. The investigation is till going on. But on the same pattern and along the same lines the western scholars also have been doing research but the results are substantially astounding and comprehensive in this aspect. The macro level researches being carried out by the Western scholars, infact, have gone far ahead of our scholars. The results are brought out into book-forms with titles such as "Sacred architecture", "Sacred Geometry" etc. The approach is very methodical and scientific. They sense a kind of divine ambience in the built-spaces related to the earlier achievements in art, architecture and town planning, which fact must have motivated them, I believe, to address them as "Sacred". This again merits in-depth study and elaboration. Yet I admire them and bow to their sincerity and open mindedness. This they say scientific honesty!

Factors that hindered development

From another angle, Prof.A. Rahman of NISTADS has made conclusive statements as under. This is based on the field survey made at a seminar conducted by NISTADS. Raising a question himself, he has given his own views. The question is why India did not further develop Science and Technology of its own? He identifies a situation for this state of affairs. He says that "The technological and scientific tradition continue to remain separate without any interaction". Further he opines that this may be due to illiteracy of artisans, craftsmen and those who are engaged in these activities and the non-availability of scientific literature in the languages of the people. The continuation of classical languages (Sanskrit, Arabic and Persian) as the language of science may have added to the problem of transmission of knowledge and availability

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to its people. Not fully agreeable, though some facts do exist.

Independent origin and development

Another statement that he had made after an extensive search is this, "The references to some of the features of Science and Technology in India, in relation to the developments in Europe in the then contemporary period have, indicated that both in science as well as in technology, there appeared to be significant store of knowledge and expertise which was in no way inferior when compared to the Science and Technology that developed in Europe". What he says is that we had a separate tradition of Science and Technology in the past, with independent origin, existence and development, but further development came to a stand still on account of lack of interaction with other traditions. Accepting certain observations, what is saddening in general is, that inspite of deep researches, the chaff is not yet sifted from the grain, the fiction from the fact.

Finally he is holding a personal view, which he has recorded in the footnotes of his paper. This is what he has recorded. **"In the history of national movement, the role of artisans and craftsmen is often overlooked.... The study of this topic would, not only be of historical interest but would be of considerable interest to some of the contemporary problems."**

Artisans and Craftsmen

At this juncture, I would like to make a pause and reflect on Prof. A.Rahman's final statement, just now quoted above. Prof. A.Rahman has made use of two words 'artisans' and 'craftsmen' to denote the traditionalists of today, who according to him and in reality, have been over looked in the national movement and development. In this context, I would request you, to pause and bring back to your mind's eye, for a few minutes, the panoramic achievements of India's past based on indigenous talents. Now I would like to ask a few questions bearing on this situation.

Neglect of Research on Vaastu Science and Technology

Were not the achievements of our ancestors astonishingly stupendous, magnificent, and visual testimony to our technological advancement? Look at the great temple buildings of gigantic

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proportions. (That they are not religious edifices, you would find it revealed during the succeeding discussions). Are they not lying still uninterpreted and not fully understood by our own men including the actual doers? Are they not still puzzling and mysterious? Inspite of this don't they directly or indirectly, clue us into the existence of a unique science and technology in the past? Have we made any attempt to trace out the source or holders of knowledge and wisdom with any concerted and conscious efforts? It is very unfortunate that no such thing has occured in our country except Dr.P.K.Acharya's attempt, made some 70 years ago. After that, no worthy attempt has been made by any of our scholars or practitioners. They attribute, the problem of language, to their complacency. When we are capable of interpreting Vedas couched in the terse language of the remote past, why not they work on simple and understandable Sanskrit in which the country's Vaastu Shilpa knowledge is preserved? Have we ever made any honest attempt to interpret atleast the translated works available in the regional languages and examine the existing monumental works, with reference to those texts? **The Vaastu treatises are a grammar book of visual forms. As a practitioner, I would like to say, that they are secular documents of science and technology. You will be surprised to hear me say that even our god-forms are secular in the real sense of the word. They should be called spiritual and hence universal and non sectarian.**

Remaining ignorant of basic things about our culture, we have ourselves overlooked not only our artisans and craftsmen in the national development but also overlooked our heritage on science and technology. Craftsmanship is different from technological expertise. Science, Technology and Craftsmanship are three different levels of operation judiciously interlinked. **I feel very sad to remark that no Indian University has taken any interest on this vital body of technological literature. If at all anything happens in the research labs, it is mostly historical or archaeological, not technological or scientific.**

A Unique Science and Technology

In my opinion, it is this field of science and technology that has suffered utter neglect and segregation, not only

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during colonial rule but even today as well. The secret is that the science of the East is spiritual as opposed to the physical science of the West. As earlier observed, the Indian Science has its roots in the centre of consciousness of Individual and Universal beings and the objects experienced at that level come out into the physical world processed and shaped into forms through a unique spiritual technology. **The end products of Vaastu technology are microcosms - organisms that pulsate into life - with a well defined structural form that is replicated and magnified into building forms in actual practice.**

The worthy men of the tradition

Now going back to Prof.Rahman's description, would the artisans and craftsmen be able to conceive, design and bring into existence such stupendous forms of art and utility? If the present day status of our men is too low to be worthy of the past, I feel that you may be prompted to identify or ask who really the worthy men were and who were the actual holders of knowledge wisdom and expertise? Our researchers seem to have never reflected on this vital problem of identification of the resource persons. It is not exaggeration to say that the builders of our ancient culture and civilization were not mere artisans and craftsmen, but they were scientists and technologists of exceptional wisdom and talents. They were of course, the ancestors of the present day artisans and craftsmen. **My humble caution to researchers is that today's position should not be taken as the basis for the interpretation or evaluation of our scientific knowledge and technological expertise. This is the place where most of us fail, leading the society from darkness to yet another darkness.**

In this context I would like to pose some more questions for you to ponder over and to some extent assess the exalted status of indigenous sciences. Let me restrict myself to the questions related to temple buildings, dwelling houses, public buildings and principles underlying town and village planning - the problems of Vaastu Shastras. There are other areas such as ship building, flying machine, astronomy, medicine, mathematics which I would reserve for our consideration at some other occasion.

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Rebuilding of Indian Science and Technology

You could have seen stone built structures, brick built buildings, imagic forms of worship raised by these eminent architects and builders of the past all over the Indian sub-continent. Are we not still living in the old built-spaces, old towns and villages conceived and made into realities, by the Vaastu shilpa tradition? Don't we say that they conferred on us prosperity and peace over the centuries? **If science is for human welfare, and promotion of spiritual well being, it is Indian science and only that which is relevant today. Science was never used in India for making profit or for creating inequality among nations.** What happened to those shastras and to the practitioners? These things are addressed not only to our own researchers but pointedly to the practitioners. The role of the practitioners is very important at this period of history. Let us have a recap of our own heritage and go into action. There are a number of Upanishads pertaining to Vaastu Shilpa lore. We concentrate only on a few, ignoring the rest for reasons unknown. My wish is that they should emerge out of the recesses of dark rooms of scholars and practitioners and help our scientists and practitioners to rebuild the dilapidated house of the science and technology of India. It would be a national service of inestimable value. The self respect of our nation should be preserved and promoted at any cost.

Recently, motivated by this feeling of patriotism, a section of Viswakarmas of India have organised a research institution entitled Akhila Bharata Viswakarma Sahitya Academy, with the primary aim of collecting all available technical material from different sources - human and institutional. It is now at infant state. It is concentrating on source materials from Kerala and Nagercoil, T.N. Simultaneously, shilpis of Andhra and Karnataka are also on their feet to make collections of rare and old works. I invite scholars of the Indian union to join us in this noble task. At this juncture, I feel that there is an immediate need of sincere governmental effort in this direction before long. The National Institute of Science and Technology and Developmental Studies can do this work successfully.

At this point, I know that you are

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about to ask me what my Vaastu Vedic Research Foundation is doing in this direction. A little later, I would be unfolding to you what I am blessed with and what I have been doing all these years and what I propose to do in the near future and also ultimately.

Under the patronage of the benevolent and affectionate Govt. of Tamilnadu and Govt. of India, I am making my own substantial contribution under the roof of the Vaastu Vedic Research Foundation abbreviated as VRF ('V' stands for Vibration, 'R' for Rhythm and 'F' for Form), which is dedicated towards exposing the quintessence of Vaastu Science.

Shilpa Shastra neither Sectarian nor Religious

The contemporary generation looks upon Vaastu Shastra as a religious document of sectarian nature as they have been associated with temple designing and building as also making of idols for worship, for a long time. What the shilpis were doing to meet the secular needs of the community in terms of residential buildings, palaces, mansions, tanks, etc. are not known to them or they are being looked at from a distorted angle. These activities had come to a stand still even before they were born. During the alien rule, it has suffered neglect and set back and has been totally eclipsed. During their rule, there appeared many schools for art-education in the country, but were all on western model. No institution was established for the simultaneous growth and development of indigenous art traditions. Its association with religion appears to be the reason for this negligence. Not only that, the westerners were bent upon preaching their religious faiths and established their religious institutions all over India. This moves us to remark that the instrinsic secular nature and spiritual base could not be comprehended by the rulers, to extend equal patronage to Indian Art. They did study artefacts, carried out archaeological surveys, wrote books on culture and philosophy, studied scriptures, preserved the monuments and produced monumental volumes on art and architecture, but never encouraged local talents and wisdom to march with the times. The spirit behind the scriptures and structures did not reveal themselves to them. Hence it looks much outdated also. That this is timeless and

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eternal, you would be knowing later. That religion, in the Hindu concept, is spiritual and hence universal would also be discussed later. The west is also realizing the values, of late, on account of recent unbiased researches into the ancient science and technology of the East and the West. The occidental experience, I believe, would help the tradition to remerge with a scientific garb. The occidental waves of spiritual science and technology have already started sweeping across the continent of Europe, with its nuclear point in Holland, under the able stewardship of Maharishi Magesh Yogi, affectionately and respectfully addressed as Maharishi T.M. (transcendental meditation).

Contemporary Indian Scenario

A section of our contemporary Indian society with secular frame of mind, looks at the tradition with contempt. Another section, twisting facts and linking it with religions, selfishly and wantonly divests Vaastu of its scientific core and unique technological approach to spiritual well being. They do not encourage, on this account, the native talents. Because, they are too materialistic and too western in their life style, though they speak of Indianism in public platforms. They are hypocrites with too many masks on their face. So the opportunity for traditional architects to do secular works direct from the society has almost disappeared. The institutional education imparted in the western pattern in our colleges has deprived the Shilpis of their opportunity for work and growth. If at all there is something visibly favourable, it lies in the shilpis' services being utilised by a section of the Indian architects for certain decorative works on the exterior and interior of modern framed structures. This skill is not taught in contemporary institutions anywhere in India. For this, they look for traditional skills and stealthily make use of them for their advantage. This is just to give an Indian look to the western models. The western architects call it Indianisation. This is merely in response to a compulsion and demand for introduction of indigenous concepts with modern amenities from a section of the contemporary society. The exquisite beauty of the finished buildings according to Indian standards has a mesmerising effect on them. Classical aesthetics, principles of rhythm, balance, and symmetry have also attracted the attention of a section of contemporary

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architects. But they are yet to pay attention to the scientific aspect of building technology. The social outlook in general is changing. During the period between 1995 and 2000 a series of seminars, as many as 100, have occurred in India, mostly in favour of this science. Even engineers and architects have started advocating Vaastu principles though they are yet to focus attention on the scientific aspect. This may be taken as a good sign for a change in favour of indigenous talents, science and aesthetics. My humble opinion is that if this dilemma is solved satisfactorily there would be patronage from all sections of our own society. Therefore the first work to be taken up by traditionals of today is that they should wipe off the mistaken notion that Vaastu is religious, sectarian, superstitious and irrelevant and re-establish that it is simply scientific, secular, spiritual and therefore universal and fit to be adopted throughout the world. And that Vaastu as a world heritage, should be emphasised and wide publicity made. The modern media of mass communication, particularly the television and electronic mail can promote considerable advance in this direction.

Maharastra and Kerala leading in Research

In Maharastra, some genuine efforts are visible on the horizon. Eminent scholars, engineers and architects have launched on a mission to identify the truth. Technical experts and linguists are coming together and working together to understand the spiritual values of the Vaastu Shilpa tradition and the science and technology involved therein. What is again the difficulty faced by them, is the problem of classical languages such as Sanskrit, Arabic and Persian, as Dr.Rahman has remarked. However to go deeper into the scientific and technological aspect they need substantial help from the tradition. The lack of proper interpretation of the principles from the practitioners' angle, seem to be the reason for the slow progress. Yet they are on the march.

In Kerala, the housing architecture is taken up as a subject for teaching at college level. Quite a lot of documentation as also research and application are going on side by side. It is expected that Kerala would lead in the matter. It enjoys governmental and social support. Let us examine the status of present day

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practitioners in the Vaastu Shilpa tradition and their ability to contribute towards the promotion of the scientific and technological basis of the tradition.

Practitioners on the other hand are able to internalize work-problems and respond to problematic situations easily and effectively. Their skill is still lying with them awaiting opportunities. But they are not able to communicate nor have they recorded such experiences for posterior references. **It is a kind of oral communication and direct application during work situations that matter much in this branch of traditional teaching and traditional learning.** A kind of affection, trust and cordial relationship between the teacher and the student are very much required for proper propagation, assimilation and application. This is ofcourse, common to all spirit-based artistic traditions. But in the case of Vaastu Shilpa involving visual communications, the physical interaction and exchanges, and above all, total involvement which we call as 'devotion and dedication' are pre-requisites. The practitioners of today possess mostly work-experiences but not that much knowledge of the Shastras. They themselves have developed a kind of displeasure towards the classical languages and religious overtones of their profession. In short, they have become oblivious of the scientific content and character of their own tradition.

The Govts. state and central, are also favourably posed towards promoting art-education in many a way. But the quantum of revival efforts takenup by the governmental bodies for the Ayurvedic and Siddha systems of medicine, are not available for this tradition in any way. The cine field and that of music and dance are enjoying enormous benefits from the state and central governments too.

Service Corporation

The images of Gods and Goddesses have become commercial products of export through governmental agencies or corporations. There is large amount of production and huge profit, though there is no improvement in technology or in the quality of products. What is distressing is that they are treated as toys for interior decoration in public and private spaces in India and abroad. If this is stopped, the livelihood of traditional craftsmen would

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be seriously affected. Now they are very happy, with their traditional poverty, drifted away. Under the circumstances, the demand for change and encouragement for secular themes for material representation, should come from the society. The shilpis open the eyes of the deities for worship and social well-being but their eyes lie closed to the values of the forms they produce. If this is realized, certainly there will be a flow of quality products of secular and utilitarian value. Such serious attention is lacking, at all levels. The seemingly religious flavour enveloping the tradition is found to be the major factor affecting its development.

Encouragement of Tamilnadu Govt.

In Tamilnadu, at the Govt. college of Architecture and Sculpture, Mamallapuram, the temple architecture has been successfully brought back to life. It is safe and developing. Such an attempt has not been made by any state government in the Indian subcontinent. The institute started as a work yard in 1957 with a certificate course, has risen to the status of a degree awarding institution. The Govt. is willing to raise it up to any level provided there is traditional competence to teach and carry on. There is bright future for this institution. The alumini are doing well at work level, with stray instances of enjoying leadership for independent designing and executing. But there is no agency for the alumini to depend upon and group themselves into guilds as the tradition had in the past. Traditional housing architecture has not yet found entry into this curriculum. The western mode of building architecture has made great strides in our country on account of institutional training and the trained personnel getting themselves united under a strong body of Indian Institute of Architects! They are doing stupendous works suited to the changed life style, though luxurious in character. To lead a simple, happy and contented life, for the poor and the middle class, house patterns are yet to develop. Only the tradition could offer solutions. But the passage is blocked.

On the design and work side, the Govt. was pleased to offer two unique opportunities to exhibit indigenous talents in design and execution of two major building works for the Tamil University,

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Tanjore. The traditional space concept, principle of rhythm and beauty could be introduced very successfully there. Those two buildings are of huge sizes, the administrative block measuring 400 feet long and 130 feet high, and the library building measuring 400 feet dia and 100 feet high. Those two buildings were designed and executed by me for the Tamil University in Tanjore during 1985-88. The then Chief Minister of Tamilnadu Govt. Dr.M.G.R. and the then Vice Chancellor of the University Dr.V.I.Subramanyam encouraged me to do these master pieces. The tradition is very much indebted to them. The two master-pieces attract the admiration of one and all and bear testimony not only to the traditional skill in design and execution aspects, but also its capacity to meet contemporary demands and challenges. The monumental Valluvar Kottam built in Madras, in 1976, out of granite stones is another marvel, worthy of being mentioned here. The technological skill in creating a replica of timber architecture apart from its literary, aesthetic values and social relevance has accorded it a unique status in the domain of contemporary architecture. The then and Chief Minister of Tamilnadu, Kalaignar Dr.M.Karunanidhi himself being a creative artist, extended whole hearted support to Vaastu technology and Vaastu aesthetics. I did this under his direct stewardship. I am profoundly grateful to these two eminent personalities who lovingly helped me to prove to the world outside that the traditional skill and wisdom are still alive and not dead altogether. They did not speak but did substantial things for the tradition to rise up and continue with renewed vigour and vitality. The secular and utilitarian principles are predominant in those two exemplary creations. Under the circumstances the contemporary architects with rich practical background coupled with knowledge and wisdom of this ancient tradition and supported by traditional shilpis with progressive outlook and competence, should make a joint effort towards reviving the tradition of Science and Technology concerning Housing Architecture. There should be no religious, communal, racial or regional bias, nor linguistic considerations in the way of implementing the programme of revival and development. Institutes with exclusive focus and involvement in research and development on the Science

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and Technology of the Vaastu tradition, should also be encouraged simultaneously with funds, treating them as feeder centres of knowledge and skill, for enriching institutional instructions.

Shilpa Shastra, A Spiritual, Aesthetical and Scientific Document:

Now, coming to the art and science as understood and practised in India, let us reflect on its creations and explore where they stand, where from they take their roots, whether they have the anchorage in the religion, or it has its own independent origin and development, or the Vaastu tradition itself has generated any belief system of its own in the past. These remarks merit deep and unbiased search.

Art, whether of Indian origin or of any country, has never been and can never be religious or sectarian. In Indian context, existing as 'Essence' in the centre of consciousness of the inner being, it vibrates and takes form. Indian art, therefore is a spiritual product. Take for instance, poetry or music or dance of the same classical tradition. Any creative urge emanating from the inner being, as a result of experience of 'Rasa', turns out into artistic expressions in a variety of streams and forms. There is a unique grammar, involving the dynamics of the spirit. There is a mathematical system based on this spiritual dynamics. They account for the exceptional status of these traditional technologies. What would you say now? How would you refer music, dance and poetry? Secular or Religious? No doubt, in actual practice they illustrate sometimes more of the themes of various religious cults than those subjects of national, regional and common interest. Yet we do not call them religious or sectarian. The technological texts of these traditions known as 'Lakshana-Shastras' are their grammar. Would you call these grammatical treatises, as religious documents? We have grammar for all languages. When a language is used for religious cause, would you call it religious and sectarian? Can we say that Tamil or Sanskrit is religious and sectarian merely because they have religious hymns and songs in abundance? Is English Christian? No, they are all instrinsically non-religious and non-sectarian but utilized for certain cultural purposes. What is very important to note here is that they are not only secular at core, but there is as well a

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unique science of universal character underlying the grammar and related creations. Such is the status of Indian art and architecture of the Vaastu Shilpa tradition. They are basically scientific and secular in as much as they constitute a grammar of visual forms and it is a language of visual expression. Just like music, dance and poetry, the experiences and expressions of Vaastu Shastras are really spirit-based. Are you able to follow and identify it as such? Convinced? The Vaastu tradition has been playing a duel role in our culture and social life, first as a fine art and second as a utilitarian and industrial art. As regards to its contact with various religions, there is one vital point to note about the behaviour of the Vaastu tradition.

Impact of Religion on Vaastu Tradition:

There is no doubt that religion has its own merits and standing in the social culture of our country. But the association of this Vaastu-Shilpa tradition with the various religious cults has generated certain misgivings and misunderstandings which ultimately led to the loss of all round social support. Today the society is a mixed one, as distinct from the oneness that existed in the past. Unless, and until the universal and spiritual aspect of the Vaastu Shilpa tradition are appreciated, I believe, there will be no redemption from the present status. Hence-forth, we have to make an unbiased, open-minded, and honest study of the religious history with reference to today's context. There are two main reasons for the Vaastu to be looked at as sectarian and narrow. The worshippable objects that are obtained through this tradition are subject to ritualistic adoration, which adoration overshadows the spiritual message of such creations. The meaning of the forms that are so adored are not easily understood by the lay public and as a result a superstition has developed over that culture. On account of this, the religious cult has come to rest on a faith or elderly advice and insistence. Such of those that are belonging to one sect looked down upon another with contempt and disregard, forgetting the commonness of the spiritual message that the forms express. This gave rise to religious feuds during the historic periods. There are too many instances in the annals of our country. They are still existing in one form or another. This has affected the spiritual

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values embodied in the Vaastu and Shilpa, and also our spiritual culture in general. Secondly, these forms of the Vaastu and Shilpa, be it a temple or a sculpture, look much different from that of the products of other world art traditions. Why should they look different? Is there anything special about them? Are the figurines brought out by this tradition, really god-forms that are worth so much adoration and worship at heavy costs? These have been remaining unanswered questions over the years. These are neither scientifically interpreted nor convincingly settled. The day has come, for this mystery to be unravelled.

Of course there are art traditions that make exact copies or photographic versions of gross nature in their variety of moods and reposes. This they call realism. But realism in Indian tradition has a deeper significance. They are concerned with reality of nature rather than rendering exact replicas of gross nature. In simple words, the reality means only the intrinsic quality (guna) of nature - the quality of the spirit - the elemental, orderly behaviour of various objects of nature. Take for instance, the plants, creepers and trees. How are they depicted? Have you seen anywhere in the Indian portrayal of the gross visual forms exactly as they exist in nature? Never could you have seen nor attempted by the artists of classical traditions right from Kashmir to Cape Comerin. Instead, you would be seeing their qualities, that is elemental inner dynamism that prompt into existence their external forms and behaviours. As a matter of fact, you would see the abstractions of the inner qualities and outer behaviour of the plant-kind, such as curling (of the tender creepers), folding (of the leaves), unfolding (of the buds into flowers), frilling (of the leaves and stretching (of the stem and branches) rendered in a multitude of shapes, maintaining at the same time the basic physical features by which they could be distinctly recognised. In the above example, what you have to note is that the elemental qualities of the energy contained in the plant-kind are expressed in abstract linear tones such as - stretching, flexing, folding, unfolding and frilling and the outer physical form developed aesthetically as the artist experienced. All such qualities are abstracted and brought into a frame work of 'five fold efforts' of the live-form of

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the plant-kind. They are said to be the basic elemental functions of the spirit contained in the particular live form. This is the basic science on which the Vaastu Shilpa tradition is developed. This is illustrated as an example to aid easy understanding of the basic science of the spirit or energy contained and functioning in all forms of nature. They are called panchakrutyas or Iynthiram (ஐந்திறம்) or Iynthozhil (ஐந்தொழில்) meaning five basic behavioural attitudes (Pentadic feeling tones) of nature. In this connection there are still subtler things to discuss. But this is suffice for the present and the same will be brought under discussion in appropriate contexts.

The Anchorage of the Vaastu-Shilpa in the Science of the Spirit:

In between, I would like to intervene and ask a pertinent question. Have you come across any art-tradition in the world whose products are adored, prostrated before and worshipped day and night as sacred and divine? What is amazing is that even buildings of this tradition are worshipped and treated as supremely sacred and divine. They are said to be various forms of the divinity. Even dwelling houses are looked upon as living organisms in this tradition. Do you know that most of our religious iconic forms are secular and scientific in their conception and construction? While 'Spirit' or 'Energy' is the common base and the spring board for all religious and secular edifices and forms, what value would you assign to the Indian art - creations particularly of architecture and sculpture? The spirit is unknown, unseen and unlimited in space, but it is limited and brought into a variety of visual forms in this tradition for all of us to commune with and enjoy the pleasure perpetually. **They are basically scientific, conceptual spiritual, experientially elevating, techno- logically utilitarian, and aesthe- tically pleasing.** (This is spiritual realization. This is spiritual pleasure). In this Vaastu Shilpa tradition, you would find science and spirituality intermixed or fused into one. Is it not our prime duty then, to preserve this scientific architecture and scientific forms? Yes, the dance form of Shiva is scientific at core. Could I say that we worship really science benefits and functions and benefits? Is it not our immediate concern

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therefore to revive, promote and continue the tradition before it is completely lost? Being spiritual, it is a living tradition even today but in a small way. We have, therefore, a heavy responsibility to see that the lamp of our science-based culture burns with more effulgence than it did in the past. What is urgently required today is that we have to strike a balance between the benefits of materialism of the West and the benefits of spiritualism of the East and agreeably blend them, as also apply them for the common weal of the humanity at large.

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VITRUVIUS,

ARCHITECT ON CRAFTSMANSHIP and SCHOLARSHIP

Vitruvius was a celebrated architect of Rome who lived in the 5th Century B.C. Dr.Prasanna Kumar Acharya of Allahabad, India has done deep research in respect of the antiquity of Mānasāra Vaastu Shāstra which he edited and translated into English in the year 1933, published by the Oxford University Press, London. No scholar of repute has done such a great service to bring the technical treatise of the Indian sub-continent back to life. The first Indian scholar who brought this unique technology treatise to the notice of the western scholars was Sri.Ram Raz, equally a great scholar, patronised by Maharaja Serfoji of Tanjore, Tamilnadu. Ram Raz's essay on architecture of Mānasāra, that appeared prior to P.K.Acharya's caused a flutter among world scholars.

This Dr.Acharya, was able to find quite a lot of similarities between Vitruvius and Mānasāra. We Sthapatis of the South India do recognise and appreciate his findings. Is not the history of the old world changing today? Mayan of India and Maayan of Mexico are identified to be one and the same person, and the contribution of South Indian sculptors in the erection of Egyptian Pyramid is also brought to light by contemporary researchers. The cultural history of India needs revision.

"Those who have aimed at acquiring manual skill without scholarship have never been able to reach a position of authority corresponding to their pains, while those who have relied only upon theories and scholarship were obviously hunting the shadow, not the substance.But those who have a thorough knowledge of both, like men aimed at all points have sooner attained their object and carried authority with them".

— Ar.Vitruvius

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5

TRADITIONAL INDIAN SCIENCE & TECHNOLOGY

In this age of highly advanced modern science and technology, it would seem highly incredible, if I were to express the truth that, in the past, India had a science of its own, noted for its supremacy and uniqueness.

It lay dormant during all the alien rules but today it is reemerging spectacularly - not only here, but in the west as well! This science succinctly called the Science of Energy and Matter, Time and Space, Space and Spatial form is actually a science of the Subtle Energy turning into gross energy or embodied energy, which is otherwise called material form. Further it may be added that it is a science of Sound and Light & Word and Form, based on which, the material forms such as building architecture, temple architecture, town and city planning and imagic forms are evolved. They are all space centric but not religious or sectarian as mistakenly construed by many.

This may be restated as a Science of manifestation of Energy into material form. This has further led to the discovery that the universe is subject to a mathematical formula and architecture is yet another manifestation of this formula.

This is the science underlying technological principles and processes in the domain of traditional art and architecture of Vaastu Shāstras. This ancient science of India is designated by the author of this article (Sthapati) as **Mayonic science and technology,** not only to make it distinct from the contemporary material sciences, but to restore and revalidate the unique spiritual science of a great scientist and technologist called Mayan, who lived in the land, south of

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the present Kanyakumari, known today as Kumari Continent. This land mass was called நாவலந்தீவு **Jambudweepam**, during Sangam days. (10,000 BC and beyond).

Mayan, the Brahmarishi and Vishwakarma, so introduced by Veda Vyasa, carried this Vaastu tradition from South to North, East and West of India and made it a national tradition, even in the remote past, when communication was not so easy as we have today. Today's researches show that it is international too. The Vaastu tradition as known today is Pan Indian and all the shilpis of India, belonging to Mayan tradition carry his title 'Viswakarma' till date. The shilpis of Mayonic tradition have migrated from the South and settled in different parts of the Indian subcontinent, as a result of land disturbances, called deluge or continental drifts - that had occurred in the remote past, around 10,000 B.C. This is now recognised to be the original home of human race and human culture. The aim of 'Sthapati' is to reanchor the sacred science of Vaastu on the soil of its birth and to popularise this message among the world community.

There was and there has been in vogue another science called Āgama, in the domain of religion. Vaastu and Āgama are the two sciences that have been lying neglected, unexplored, uninterpreted and not brought to society's attention for several hundreds of years. However, the application and the benefits that accrue out of these sciences were recognised and enjoyed over the centuries. Today, they are attracting the attention of contemporary society as well as scientists, engineers and architects all over the world. The inquisitive and highly educated Indians have come together to revive and promote these two fold traditions for the welfare and well being of human race. It is indeed a good fortune that this science is gaining world-wide recognition. It is getting proved to be relevant in today's context.

It is therefore, the paramount duty of every Indian to study and practice this Vaastu science and technology, before this is carried over to the West and learnt from the overseas universities at heavy cost.

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Let me give an overall picture of the science of Indian origin. This was variously interpreted over the centuries, the source remaining untapped till date. This is the first time in the history that a Sthapati practising in Vaastu Science and Technology is exposing the profound truth behind the eternal, spiritual culture of the Indian subcontinent. The genesis of Indian art and architecture are also dealt with by him elaborately, with the available evidences on date. Certain old treatises on Mayonic science have come within his possession and this science and technology are found to underlie various concepts dealt with technologically in the existing Vaastu and Āgama Shastras. The science behind **Vaastu Purusha Mandala** lying so far in the dark, has been brought to lime light and brought alive in this Sthapati's volume on Sthapatya Veda. Though the topics dealt with are different and technological, the science gets repeated and highlighted at every stage for the readers to get acquainted with the terminologies, theories, sutras etc. Similarly, certain cosmological concepts dealt with in the Upanishads within the frame work of 108, and a few lying with Karnataka and Kalinga (Orissa) Sthapatis are also brought into focus as supportive materials. Rig Vedic references are also included showing that Vaastu Shastras are pre-Vedic basically and hence of very remote past. **The repetition of scientific principles in this volume are found to be indispensable and imperative in view of the fact, that this science comes to light only in the fag end of the twentieth century and made relevant in today's context.** No cultural science of Indian origin does have the material so focussed by the 'Sthapati'.

At the out set, just to arouse the interest of the researchers, a brief note is presented with special emphasis on the uniqueness of the science in traditional as well as modern terminologies. It is elaborated further in the succeeding chapters.

Gist of the Science of Vastu and Vaastu

The traditional Indian Science is the science of Energy and Matter - It is the science of Time and Space - It is the science

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of Spaces and Spatial forms - It is the science of Sound and Light - It is the science of Word and Form - It is the science of [1]वृत्त ज्ञानं and रेखाज्ञानं (Vritta jnānam and Rekha jnānam) It is the science of Potential energy and Kinetic energy. It is the science of the Subtle universe and Gross universe. It is the science and technology of Art and Architecture.

To use Indian terminologies, it is the science of Vastu and Vaastu - It is the science of Nishkala and Sakala - It is the science of Vishwa Brahman and Vishwakarman - It is the science of Vastu Brahman and Vaastu Brahman - It is the science of Sabda Brahman and Artha Brahman - It is the science of Nirguna Brahman and Saguna Brahman - It is the science of Anu and Andam - It is the science of Brahmajnānam and Pratimajnānam - It is the science of the Jeevātman and Paramātman - It is the science of the Unmanifest (avyakta) and the Manifest (vyakta).

It is the science of அருவம், அருவுருவம், உருவம் (aruvam, aru uruvam and uruvam) - It is the science of விண், மண் Space and the Earth - It is the science of ஒளி, ஒலி Light and Sound - It is the science of சொல், பொருள் word and form - It is the science of பருப்பொருள், நுண்பொருள் gross and subtle substances - It is the science of இயல், இசை, நடம், சிற்பம், கட்டிடம் poetry, music, dance, sculpture and architecture.

The scientific aspect of Vaastu and Āgama was never, in the history of post vedic period, sifted from the technological material that we have in Vaastu and Āgama shāstras and presented with exclusive focus. In this book, this is attempted to the extent possible with reference to Building Architecture.

There is enormous scientific material associated with temple architecture. This is also on the anvil and likely to see the light of day in the near future.

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1 वृत्रज्ञानं च रेखाज्ञानं यः जानाति सः स्थापकः - Vaastu Sutropanishad. The meaning is that he who understands the science of 'cyclic time' and 'grid system adopted in Vaastu purusha mandala' (Time and Space) is the Sthapati, the architect and builder.

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6

SACRED GEOMETRY

Readers have to go deep into the observations of Dr.Robert Lawlor. It is very siginificant that Dr.Lawlor has identified the roots of the ancient scriptures on Vaastu, in the science of rhythm and form, which fact, the 'sthapati' has been repeatedly mentioning all over the treatise on Sthāpatya Veda. It is hoped that the local scholars would feel free to accept and applaud the efforts of the 'Sthapati', to expose the root-source of this indigenous science.

"The fundamental nature of the material world is knowable only through its underlying patterns of wave forms".

"Both our organs of perception and the phenomenal world, we perceive of form and proportion. Therefore, when many ancient cultures chose to examine reality through the metaphors of geometry and music (music being the study of the proportional laws of sound frequency) they were already very close to the position of our most contemporary science".

"The point of view of modern 'force-field' theory and wave mechanics corresponds to the ancient geometric - harmonic visions of universal orders as being an interwoven configuration of patterns".

Robert Lawlor quotes Bertrand Russel in this connection as saying "what we perceive as qualities of matter, are actually differences in periodicity".

— Sacred Geometry of Robert Lawlor
Architect and Scientist of Australia.

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GENESIS OF TRADITIONAL INDIAN SCIENCE, ART & ARCHITECTURE

VAASTU is a word that had its genesis during the pre-vedic times and had been in currency throughout India, doing silent but meritorious service, for the welfare and wellbeing of the society till the advent of Western Culture- Today it has erupted after a lull in the recent past - It is spreading very fast like wild conflagration - It has touched foreign shores too - A good number of Vaastu pandits, Vaastu consultants and Vaastu experts have come on the scene to set right defective building designs - It is an indication of wide spread sufferings of contemporary society - What is distressing is that such sick buildings are multiplying - The sickness of buildings is recognised or experienced only after the house is occupied - Remedial measures proposed by today's consultants do not mitigate the sufferings - On this account certain intellectuals and the educated moderns suppress and distort Vaastu, sometimes speak disparagingly too - Yet set backs and sufferings among human beings multiply and continue to emerge here and there - Society is at cross roads not knowing whether to accept or reject Vaastu- On the contrary, one section of the society insists on the application of Vaastu principles in the design of residential buildings and factories. The basic reason for this confusion and contradiction is that this Vaastu is taught no where in the regular architectural colleges and nobody seems to possess deep and comprehensive knowledge of Vaastu science and Technology - Yet they call themselves Vaastu Consultants immediately after they come out of their colleges - Another reason is that Indian technological treatises, the Vaastu Shastras, are based on a unique science is not known

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very much to younger generation - This is because of the fact that the Indian science is not evolved out of technology but on the contrary, the technology is evolved out of science - So unless and until the science is known, the technological principles and practices cannot be appreciated in true perspective and applied effectively.

But the Western architects and researchers who visit ancient monuments, do find a unique order and form, in the composition of individual structures as well as complexes, though the science underlying such creations is beyond their reach - However they do not suspect but respect the tradition and call it "Sacred Architecture" and "Sacred Geometry" - They hopefully continue to go in search of the truth. In my opinion, they have already set foot on the domain of traditional science and arrived at certain wonderful theories, but they are not able to identify that they are closer to the traditional theories implied in the Vaastu principles - Hopefully, they will succeed before long - That day will be the happiest day for Vaastu.

That, Vaastu is a super science has not been known to anyone in the land of its birth - As assumed by a few, it is not restricted to locating Bed room and Kitchen in a built environment - Its genesis, its science, its technology, its universal applicability and utility are yet to be brought to the notice of scientists - Is it science or religion? Still such a question remains unsettled logically and scientifically.

This text of the Sthapati makes a honest and humble attempt to unravel the mystery - Not only his life long dedication and research, but life long association with design work and field work has equipped him with enormous material to launch on such interpretation, with missionary zeal - It is identified by him to be an advanced science - In one word, it is a science of universal creation.

The true Indian culture lies hidden in this science - It is a science of manifestation - In fact, it is a Veda in its own right - It is Sthapatya Veda - It is Vaastu Veda - Nobody is aware of this fact or terminologies.

In another context, the science of Vaastu is that of uttered word and corresponding visual form, called Pada and Artha & Vak and Artha and that of an order governing form generation and form figuration.

Indian traditional architecture is the only one in the world to have

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a grammar for Architecture and Sculpture, just as we have a grammar for language - Hence, unless and until one understands the language of art and architecture as in Vaastu Shastras one would naturally remark that it is mystical - Architectural aesthetics also remains to be un-intelligible and inimitable - The poetic bias and the conventional and symbolic language applied in the creation make the forms un intelligible, though inviting and enjoyable - These make what are called words, phrases, idiums and metaphors in the language of Art and Architecture of the East - Hence, it is repeatedly observed by the Sthapati that Vaastu Shastra is a grammar book of visual forms in as much as there is a grammar book of aural forms - The former is visual poetry while the latter is aural expression in wordy form - Can we say now that such a tradition is rare to be met with any where in the world? It requires consistent practice as for Karnatic music or Dancing. Mayan of Ramayana, Mahabharata and Silappathikaram is identified to be the scientist and technologist- He lived during Sangam days on a mountain called Mayendra-ma- malai - He was also a great poet and an architect - He is also identified to be the progenitor of Maayan culture of Mexico - The science of Indian Vaastu is applied in all the Maayan buildings including Pyramids.

Among the many languages of the world, Tamil language alone enjoys a special and unique status. This statement may sound rhetoric and chauvinistic; but the fact is that Tamil language is the oldest of all languages. The land of the Tamils has been destined to be the cradle of earliest human origin. And it has been the hub of ancient human activity and nursery of culture and civilization, before they spread into other parts of the world.

From the ancient past, the Tamil language has been inseparably associated with the epithet, "Muthamil" முத்தமிழ் i.e. three fold Tamil. But Tamil has two more dimensions, thereby to be called as "Ayin Tamil" ஐந்தமிழ் i.e.five fold Tamil. The main objective of this chapter is to explain this special attribute of Tamil and the birth of five fold arts.

It is to be pondered over as to why other languages of the world do not carry

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along with them this kind of tri-fold epithet as of Tamil language. Muthamil முத்தமிழ் comprises three Arts namely Eyal, Esai & Natam (i.e. poetry, music and dance). It is no exaggeration to say that this threefold aspect of Tamil is the sole and exclusive right of Tamil language. There is no denying the fact that other languages too have the faculty of poetry, music and dance. Yet these languages do not address themselves as tri-fold English or French or Hindi or Kannada or Telugu or Malayalam and so on. Even for fun-sake or in a spirit of rivalry, they do not carry this trio-prefix with them.

Scholars may attribute so many reasons for the trio-status of Tamil. But as a man hailing from the scientific tradition of Vaastu, and as one belonging to the aboriginal creative tribe of India, I was able to discern a great deal of scientific truth behind this concept. I have a strong longing for sharing this profound truth with the scientists, linguists, engineers and architects who have been searching for the roots of Indian culture particularly of Vaastu shāstra and Vaastu principles. The genesis and development of architecture and architectural forms would be recognised to be scientific but not mystic. It is neither religious nor sectarian. The universe is ruled over by gross and subtle energies.

In the Tamil culture, tradition based poetry, music and dance enjoy a highly honoured place and the word "tradition" always carries with it a lot of weight. It is therefore logical to conclude that "tradition" has in it embedded a far deeper and subtle meaning. In Tamil, the traditional poetry, music and dance, for their meaningful functioning, have a very basic, and peculiar scientific concept. In the tradition oriented poetry, you will find a sort of mathematical base, leading to well defined and well disciplined speech - form (Sorkattu) சொற்கட்டு / prosody / Chandas சந்தம். For each and every word (like short / long vowels) there is a definite time-unit or time-measure (Kaalamatra). Word, speech or sound waves are controlled by speech rhythm. Poetry is composed on this basis. In that composition the central theme of the poem will bloom into a wordy picture. The figures of speech will add another dimension by way of infusing feeling tones. These aspects go to form a tradition based poetry. In fine, the fivefold order of grammar viz. letter, word, meaning,

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rhythm (metre) and figure of speech go to make a poem bubble with vibrant scenic beauty and you perceive this as a sound picture. For this sound, in order to shape itself into a sound picture or poetic form, Time-measure happens to be the causal element. Vaastu Shāstras enunciate that time-measure is the fundamental scientific principle used for composing poetry. The same time-measure is adopted in the field of music and dance and here the time-measure, at technological level, is termed as Taala measure. Don't you feel and agree that the Taala measure alone is responsible for creating exquisite forms and patterns in music and dance? And practically we experience the importance of Taala, in this context. The picture so created stays well in our mind. Mind creates pictures and mind absorbs everything in terms of pictures, from outside. The fact is that pictures or forms turn into words and words turn into pictures or forms in the mechanism of our inner being. Further, every picture or thought form that we bring forth into the material world is based on mathematical or numerical measure of Kaala matra or time-unit காலக்கணக்கு and vice versa. Hence, we say

எண்ணங்கள் எண்களாகின்றன, எண்கள் எண்ணங்களாகின்றன.

"Thoughts turn into numbers and conversely numbers turn into thoughts". This is the meaning of the Tamil scientific statement quoted above.

Hence, the saying, **"Number and letter are eyes indeed"**. எண்ணும் எழுத்தும் கண்ணெனத்தகும். எண் (enn) is the basis for எழுத்து (eluthu) to germinate. So is number first and letter next, in the above concept. Sound atoms come together and put forth syllabic sounds. This is quantifiable too. In actual practice the tuning fork, used in the field of music cause syllabic sounds - Sa, Ri, Ga, Ma, Pa, Da, Ni, Sa etc. They are equated to அ, இ, உ, எ, ஒ, ஐ, ஔ in Tamil tradition. Hence, the theory is that every word or every thought form is governed or germinated by a numerical measure of Time units - multiples or fractions (காலக்கணக்கு). This 'Time' is called 'Laya' in instrumental music or 'Seela kaalam' சீலக்காலம் in Tamil science. It is orderly laya or kaala that creates forms – It is laya that sustains - It is laya that destroys everything so created. Laya is actually the speed or force of Time or time - energy - hence is said to be the causal factor for growth, sustenance and

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disappearance. Because of the tri-fold function of Time, this laya is called Kaala Brahman or காலமாக்கடவுள் Kaalamaak-kadavul. This laya lies associated with or exists in our inner being or inner space called உள்ளம் ullam. The inner being (inner space) is part of the outer being or outer cosmic space. This time, that exists in universal space is called **Prapancha Laya or Universal Rhythm**. So, we the shilpis say that the Tamil poems, Tamil songs and Tamil dance resonate with prapancha laya. In Tamil, this universal rhythm is termed as ஞாலக் காலம் (Jnalak- kaalam). In Tamil tradition, rhythm is defined as சீலக்காலம் (disciplined time measure). This is frequency of vibration of inner space and outer space (அகவின் - புறவின்/அந்தரா காஸம், பஹிராகாஸம்).

In technology we call it Taalam, since it is produced by the beat of foot in dance or beat of palm in music and snapping of fingers for composition of poem. Taal (தாள்) means foot.

Thus composing of Taala based poetry, rendering of Taala based songs, performing of taala-based dance have become the innate and ingrained scientific methodology in the Tamil tradition. This is noticeable in Sanskrit tradition also, though not so specific or highlighted as in Tamil tradition.

Therefore tradition oriented poetry, music and dance have become an inseparable part of Tamil culture and hence, the term Muthamil முத்தமிழ் attained a honorific place.

But there are two more dimensions - two more Tamils - which go to enrich Tamil – one is Sirpathamil (Sculpture) சிற்பத்தமிழ் and another is Kattadathamil (building) கட்டடத்தமிழ். These two fall under Vaastu. Are you not wonder struck, to know that with the aid of the above mentioned Time / Time measure, the traditional buildings and sculptures are produced? The Vaastu tradition capitalizes Taala measure to create rhythmic spatial forms or visual material forms, such as images and buildings. We shilpis hold that poetry is aural poetic form, heard through ears while architecture painting or sculpture is visual poetic form seen through eyes. Word is aural and the meaning or material form is visual, as signified by 'pada' and 'artha', 'sol' and 'porul'. (சொல் - பொருள்) Further more, we even say that paintings or sculptures are stilled in poems and poems are stilled

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in paintings or sculptures. In fact, the inner feelings take aural or visual shape through lines with the help of time which are again nothing but dot, dash, line, form and shape. (புள்ளி, கோடு, வரி, வடிவு, உருவு) Songs are composed of aural lines and curves while, sculpture and architecture, of visual lines and curves.These are the two streams of human expression of experience. In this context you would find that Time measure or Time is converted into space or spatial forms. Hence Time and space are identified to be equals in Vaastu Science. காலமும் இடமும் ஒன்றே - **kaalamum edamum ondrey**. This is a great discovery of Mayan, the great Indian scientist and linguist.

Therefore poetry, music, dance, sculpture and architecture belong to one and the same family of the science of Time and Space- which blossom into a grammar of aural and visual forms. For this **pentadic arts, (முத்தமிழ்) Taala measure / Time measure stands as the basic scientific factor**. Vaastu tradition says that the poet builds poems by using Taala measures while the master builder builds structures using Taala measures, which is why that traditional sculptures and buildings are proudly termed as frozen music i.e. இசைவடிவம் or musical forms.

The throbbing of time or Taala measure is ever present in all living things from the atom state to their full growth (into material form). The microscopic atom of energy received by mother into her soil vibrates in an order, on account of which an orderly form is developed and delivered. The plant, germinated from the seed vibrates in an order and grows into a tree. In modern science, this orderly pulsation is called **biological rhythm**. This rhythm is said to be the 'Seelakkalam' in the traditional science. To be more precise, it is the velocity or speed of primal energy. This is the causal element of creation in the universe and for all objects of the universe. The throbbing is a non-stop mechanism that occurs every second. Our ancient science says that by this rhythmic vibration, the atom grows and attains the bodily form in a particular time-space. It is akin to sound emanating from a veena continuously, thereby making musical forms. Each and every living thing follows a certain individual rhythmical vibration, or rhythm for its material growth, which is called here 'Spatial form'. Time is directly proportional to Space. Further, Space is tridimensional too.

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In the linguistic field, the term time-unit or time-measure (Kaala matra) is used and in vaastu technology the term Taala measure is used. Force of time-energy is called Kaala Purusha as well as Taala Purusha in the technological tradition. The time energy contained in the earth and contained in a built form is called Vaastu Purusha, Vaastu standing for material form and purusha for energy. The time energy contained in a building, be it a house or temple, is known as Prāsāda Purusha, where Prāsāda is building. This is otherwise called time generated spatial form. Therefore, we may call sculptures and buildings as time generated spatial forms or **turn of time into material space**, in brief.

Logically, a house enclosing the space becomes a living organism, just as we, the human beings are living organisms by virtue of our material body enclosing the same space and vibrating from within in an order. A house building also vibrates from within, emitting wave patterns based on the order or rhythm in spatial growth. Since Time is equal to Space, a kind of rhythmical space is created in a building for human habitation. Thereby, a harmony between built space and human rhythm is established by the traditional architects. This is the grid plan that a traditional architect applies in all his designs.

Such a grid exists in the particles of energy of which the cosmic space is filled with. Logically, the universe is resting on an energy grid and the earth too, the former being subtle and the latter gross.

Such a wonderful scientific culture which witnessed a great set back during the alien rule, is gaining its renaissance in the recent years. People want to build their spaces according to Vaastu science. But genuine vaastu architects are very few in number.

This being so, in the recent days, I have come across articles dealing with traditional way of designing buildings. According to the contributors of the articles, tradition seems to mean treating the facade of buildings look traditional, ignoring the vital process of creation and configuration of modulated spaces inside the building. Without having a proper understanding or a will to know the purport of tradition, articles appear in leading magazines, mirroring the shallowness of the writers. The major reason is that, all the available Vaastu texts are in Sanskrit with no commentary as in other cultural sciences.

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To propagate the subtle science of energy and matter as well as the science of Time and Space, I participated in as many as 80 seminars in India, myself having conducted two International Meets on Vaastu in Madras and Thiruvananthapuram in 1993 and 1997 respectively. Overseas scholars also attended and a global awareness was created.

Today, I have been conducting workshops where I have been able to illustrate all my talks with notes related to the course material. The participants do prepare specimen drawings of building architecture in the workshop itself. Engineers and architects trained in the modern colleges are given preference in enrollment. So far 180 people are trained and sent out into the field. The target is to train 500 educated in about two years time.

Side by side, books are also published and put into interested hands. Further our website is also on the network to reach the outside world - www.vastuved.com

Being myself a designer and builder, I have established a 'Design wing' where we undertake designing and execution of works, so designed.

Americans do take enormous interest in knowing the science and technology that have survived many an adverse circumstance. An exclusive wing for them - **International Institute of Mayonic Science and Technology** - is functioning in Chennai, Tamilnadu, India. On the research side, there has been functioning a separate wing designated as **'Vaastu Vedic Research Foundation'.** It is publishing a research journal named **'Vaastu Purusha'** in English so as to be circulated among overseas scholars also.

The science of Vaastu originated in an island called Jambu Dwēpa, Navalantheevu (நாவலந் தீவு), that existed long past, just south of the present Kanyakumari. This is the self same island called later as Kumari continent which suffered deluges due to continental drift some 10 to 15 thousand years ago, referred to as such in 'Silappathikaram' and proved so by modern researchers of the West. Additional reference is also noticeable in Thiruvachagam of Manikka Vasagar of 9th century A.D., where it is mentioned that there was a mountain called Mayendra ma-malai, said to have

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been the seat of ancient sciences, lost later due to deluge and some of them recovered from the mouths of large fish. During this period, the Tamils had established what is known as Tamil Sangam (Tamil Academy) where great men of letters, periodically assembled and discussed the question of the promotion of Tamil language, grammar, literature and culture. Even today, that Sangam literature is available, called collections of Sangathamil. There were 49 men of letters in the first sangam, selected from each of the 49 regions known as Thenpanai Nadu (தென்பனை நாடு) ruled over by Pandian kings. It was during this period there lived a great poet and an architect called Mayan. He was also a great scientist and linguist whose supreme knowledge and wisdom were glorified later by Maharishi Valmiki in Ramayana, Veda Vyasa in Mahabharata and Elangoadigal in Silappathikaram. Puranic literature also do mention his name frequently and in glorious terms. It is this Mayan who is held by shilpins to be the original author (adi shilpi) of Vaastu Science and Technology. **It is this Mayan who is identified today as the author of PRANAVA VEDA said to be the first Veda by Veda Vyāsa in Bhāgavatam.** He is also discovered to be the author of 'Aintira Vyakarana' or 'Aintiram' which served as source book for the Tamil and Sanskrit grammar namely, Tholkappiam and Paninēya Ashtadhyāyē. All these works of Mayan are in chaste technical Tamil. He is the author of 'Suryasiddhānta' mistakenly stated to be authored by Aryabhatta. In the body of the text it is stated very clearly that Mayasura[1] is the author. The commentator was unaware of the fact that Asuras were intellectually and spiritually powerful people. This is justified by the fact that Indra and Varuna are mentioned as Asuras, in Rig Veda, though they are adored as Lord of the Devaganas.

The science of Mayan is a science of **energy** and **matter**. It is a science of **time** and **space**. It is a science of **spaces** and **spatial forms**. It is a science of **word** (சொல்) and form (பொருள்). It is neither philosophy nor religion. Since the originals

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[1] Mayan and Mayasura are one and the same person. He was born of Danava clan. He was the father of Mandodari and father-in-law of Ravana. He built the Mayasabha for Pandavas. He had travelled all over the sub-continent propagating his science and technology. The city of Mysore is named after him (Mayasur has become Mysore). He was born in Kumari continent. He was well versed in Tamil and Sanskrit.

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had been lost, the later day scholars did attempt to explore and reconstruct the culture with no success saying ultimately that the roots were untraceable. So far, no technical scholar penetrated into this realm. Now that some of the originals are discovered and the contents compared with the later day texts, the roots are visible. Now the conclusion is that, it is the science of all sciences that human mind could think of and boast of.

The primary roots of the scientific culture is, according to Mayan, Aadi moolam, meaning primary root which was called later as Brahman in Vedas, Paramporul (substance of the universe) in Tamil culture, Vastu in Indian science and technology and Energy in modern science and so on and so forth.

Mayan being a great Tamil poet and scientist had identified the qualities and dynamism of Moolam. He discovered **Moolam** as a dormant primal energy **(Space)** which by its inner consciousness (or self awareness or the thought form) pulsates into **Kaalam** (time units) and itself attaining **Seelam** (order), turns into **Kolam** (form) and 'Kolams' so emerged constitute what is called **Jnālam**, the **Cosmos**. This Moolam turning into Kaalam, Seelam, Kolam and finally into Jnālam (மூலம், காலம், சீலம், கோலம், ஞாலம்) is discovered to fall into pentadic framework of evolution called Panchakritya or ஐந்தொழில் Iyinthozhil or ஐந்தியல் Iyinthial of the Supreme Energy, beyond which nothing exists.

In this process of evolution, Kaalam causes the emergence of sound and light, that respectively metamorphose into word and form.

Mayan also discovered that this Supreme Spirit is 'subtle matter' நுண்பொருள் and it is Absolute and hence used the word Vastu. The word Vastu literally means substance that which exists eternally. From the above discussion it must be clear now that this Vastu is Moolam or the primal energy and this turns into Vaastu Kolam or form and all put together goes by the name Jnālam or the Cosmos. This is, in other words, the extension or transformation of Vastu into Vaastu or Moolam into Kolam to use Mayan's Vedic terminologies. This is the extension of subtle matter into gross matter. Now, on what scientific basis or process that the 'subtle matter' called Supreme energy turns into 'material

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energy' or 'embodied energy', is the key note of Vaastu Shāstras and the principles evolved there on.

The chapters that follow in this book will project how the technology got evolved out of the science, which fact accounts for its terseness. It may be noted again that Indian technology is evolved out of this unique science of energy turning into matter whereas, the western science is evolved out of technology where matter is turned into energy. This makes the difference between the cultures of the East and the West.

The flow chart that follows would reveal unambiguously the science of Vastu and Vaastu, on which the subsequent discussions on technology are based. All the existing Vaastu Shāstras in Sanskrit and the technological principles discussed therein, do exactly fit in with Mayamata and Aintiram of Mayan.

Let me speak to you a few more words on Aintiram. Aintiram or Aintira Vyakarana of Mayan, is not only the source material for aural forms but it is equally a strong source for visual forms called today as art and architecture. From one angle it is a compendium of cosmological principles controlling or influencing human life and activities. It is a science of sound and sound forms (speech) and it is a science of matter and material forms as well, as earlier hinted. Tolkappiam, the most ancient Tamil grammar is found to have followed Aintiram, which fact is attested by the author of Paayiram (பாயிரம்) preface as ஐந்திறம் நிறைந்த தொல்காப்பியம் meaning that in Tolkappiam the scientific principles of Aintiram are abundantly used.

Similarly, in the case of Panini's Sanskrit grammar, Ashtadhyāyē, Dr.Navajoti Singh, one of the scientists of the Department of Science and Technology and Developmental Studies, New Delhi, in his research article on Paninis's grammar has identified Aintiram's contribution (to Ashtadhyāyē) thereby revealing, in addition, the antiquity of Aintiram itself.

This Aintiram, is said to have been presented at 'Tamil Academy' (தமிழ்ச்சங்கம்) presided over by a Pandian King, by name நிலந்தரு திருவில் பாண்டியன் Nilantharu Thiruvil Pandian before the continental drift took place, as mentioned in the historic epic, Silappathikaram of second century AD.

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Such historical facts are found stated unambigously in other ancient texts of the Tamil tradition, that had tasted the impact of the deluge.

This particular text of Aintiram was published by the Directorate of Technical Education, Govt. of Tamil Nadu in the year 1987 and released by the then Hon'ble Chief Minister at Madurai, in the presence of eminent Tamil scholars, who had assembled to witness the inauguration of World Tamil Sangam.

This text had to remain uninterpreted for a long time since the matter was too technical and too scientific and couched in sutra form (aphorism or maxim). This is actually a text to be in the hands of scientists and explored by them, since, in my assessment, it is concerned with sound atoms and light atoms.

Inspite of this, what we feel today is that another edition of Aintiram with commentary on the Aintira Sutras has to. be brought out, for the science of Vaastu to reach eminent science-scholars all over the world. Hence a website (vastuved.com) is pressed into service effective from october 2000 to attract global attention. Yet regular research and propagation still continue, without any set back, in their march towards the goal.

Another text in technical Tamil, authored by Mayan is also available. It is **Pranava Veda** பிரணவ வேதம் / **Om Marrai** (ஓம் மறை) which would see the light of the day in the near future. Myself and Dr.S.P.Sabharathinam, a true Āgamic Scholar and a Research Associate of mine, are as a concerted effort to translate and interpret this technical treatise. Some verses on Mayonic Āgama are also available in my collection. Dr.S.P.Sabharathinam has identified direct reference to Mayāgama in a text called **Mrigendragama**, a printed book. Being a scientist of wave patterns emanating from Primal space, Mayan is found to have offered Kunda Lakshana for sacrificial fire pits. They are all geometrical forms such as square, circle, octagon, triangle, yoni, padma etc. together with the qualities of form.

Similarly another work of Mayan, known as சிற்பமாச் செந்நூல் Sirpa-ma-chennol is also to be published in the near future. This has been translated into English and lucid Tamil by Dr.S.P.Sabharathinam.

In all the works of Mayan in our hands today, the unique feature is that

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science as well as technology are elaborately discussed. What is missing in Sanskrit works of today and what is available today are all found in full therein. No historical note or reference to Vedas, Upanishads, Puranas and epics except Pandians, we meet with in these Mayonic treatises. This speaks of their great antiquity and remote origin. (for further details vide chapter on **"Vaastu Shāstra, a class by itself"**).

There is also a chapter on **"Pranava Veda"** which is worth reading, wherein, its independent status is discussed. Also peruse the chapter on **"Vaastu Shilpa as Advanced Science"**.

Before closing this chapter, I would like to invite the attention of scholars and the society that Vaastu is equally dominant and prominent in the domain of Āgama which is again a science, but related to Temple worship. What is to be known to the society and what has been remaining unknown to the society is that all Āgamas and Samhitas are Vaastu based, so far as their temple buildings and imagic forms are concerned. The Āgama itself is very frank enough in saying that Sthapati's role commences from the foundation work for temple structure till the installation and eye opening of the images and that of the high priest from consecration of temple form and images till the conduct of festivals and also maintenance i.e., repairs, renovation and rehabilitation (Prāyaschīta). The inscriptions on temple walls further attest to this fact, where the names of the donor and the Sthapati alone are recorded.

Signifying the importance of Vaastu shāstra as a grammar book of visual forms namely Art and Architecture, the Makudagama of the Saivite religion, makes a frank statement about the **'Sannidhya'** the presence of divine power that would rest with the shilpi - made idol of gods and goddesses in the following words **"मानेन निर्मिते बिम्बे स्वयं आभाति दैवतम्"** *"mānena nirmite bimbey swayam ābhāti daivatam"*, which means that in the imagic form carved out by shilpi adhering to the iconometrical measures (bimba māna and bimba lakshana), the divine energy becomes explicit automatically. This further means that the imagic form takes life and becomes vibrant. In brief, it becomes a living organism. The invisible becomes visible in the process of carving from a raw stone to form figuration. The invisible is shilpa and the replicas are pratimās. This is authenticated by an Upanishad called

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'Vaastu Sutropanishad', published (1981) in Varanasi by Dr.Alice Boner and Bettina Baumer assisted by Pandit Sadasiva Ratha Sarma. The sutra runs as follows - **"शिल्पात् प्रतिमाः जायन्ते"** *"shilpāt pratimāha jāyante"* meaning "from shilpa comes forth pratimās" - the rhythm bound inner vision or inner picture gets replicated, in exact measure in material form into the world of reality. In the same vein, another Upanishad, by name, **"Shilpa vidyā rahasyopanishad"** says **"जगत् सर्वं शिल्पमेव भवति"** *"jagat sarvam shilpameva bhavati"*, the meaning being that all objects of Nature are shilpas, produced by Nature itself. Another Upanishad (one of the 108 Upanishads recognised as important by Vedic scholars) says **"सर्वं खल्विदं ब्रह्म"** *"sarvam khalvidam brahma"* meaning that everything in the universe is Brahman. All of them mean that all forms of Nature are manifest forms of Brahman - Energy - Vastu, Shilpa, Ākāsa etc. - the primary source being called **'moolam'** by Mayan. For all to get manifested, the force is Time according to Mayan, which fact is not very much known to any other literature of the Indian sub-continent, not even in other traditions of the world. Certain Upanishads are not aware of the existence of the Time - factor as the creative element of the universe. On the contrary, Mayan's Aintiram centres around the concept of Time and Space.

Mayan is clear when he says that **"காலக்கூறே கணக்கியலாகி"** *"kālak-kōre kanakkiyalāhi"*. This means that mathematics is rooted in Time and its fractional units. It is Time that creates, it is Time that sustains and it is Time that takes away everything so created. He even goes to the extent of attributing Brahmatvam to Time in the epithet காலமாக்கடவுள் "Kālamāk kadavul or Kāla Brahman". In tune with Mayonic concept the Skandapurāna says **"कालः सृजति भूतानि, कालः संहरति प्रजाः, सर्वे कालस्य वशगाः"** *"kālaha srujati bhōtāni, kālaha samharati prajāha, sarvey kālasya vashagāha"*. When translated, it means **"Time creates everything, Time takes away everything so created and everything exists in the hands of Time"**.

An unprejudiced look at all those Vedic and Mayonic Vaastu Sutras, one would certainly be convinced of the advanced science that Mayonic literature had revealed to mankind for their welfare and well being.

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"वास्तु शास्त्रं प्रवक्ष्यामि लोकानां हितकाम्यया" *"vāstu shāstram pravakshyāmi lokānām hita kāmyayā"*, so says Varaha Mihira's Brihat Samhita, an encyclopaedia of cultural subjects. The sanskrit verse reads thus, **"I expound Vaastu Shāstra for the benefit of human race"** - for their ambitions and comforts to be realised.

The following flowchart focusses its attention on the science of manifestation and that of Art and Architecture. It may be carefully studied and assimilated. Scientists of today may be referred to and got clarified.

In this context, Mayan's definition of Brahman may be quoted here. It is too brief and too deep. It is the benedictory verse taken from Mayasura's Suryasiddhānta..

"अचिन्त्य अव्यक्तरूपाय निर्गुणाय गुणात्मने । समस्त जगदाधार मूर्तये ब्रह्मणे नमः ।।" *"achintya avyakta rupāya nirgunāya gunātmaney, samastha jagadādhāra mortaye brahmaney namaha"* This is the keynote of all Vaastu Science and Technology.

FLOW CHART

that unfolds the science of Vastu and Vaastu logically and comprehensively. It is expected that the scinetists of the East and the West may be pleased to go through the chart with a spirit of enquiry and earnestness. This science, it is hoped, would answer certain questions haunting the mind of the moderns. That the Absolute Time creates live forms is the key note of this Vaastu science, based on which material forms such as residential buildings and temple buildings are worked out and brought into reality.

This science of Vastu and Vaastu would also provide answers to questions of yogis remaining open ended - so remarked.

One great Yogi of our times, YOGI MAHA DEVANANDA OF CANADA, after listening to Sthapati lectures in Neyyar dam, Kerala, India.

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*अचिन्त्य अव्यक्तरूपाय निर्गुणाय गुणात्मने ।
समस्त जगदाधार मूर्तये ब्रह्मणेनमः ।।

MAYONIC SCIENCE AND TECHNOLOGY

SCIENCE OF MANIFESTATION

THE PROCESS OF MANIFESTATION
OF SUBTLE ENERGY INTO EMBODIED ENERGY
(Science of form generation and form figuration)

MOOLAM/ENERGY

Vastu/பொருள்/Subtle energy/நுண்பொருள்/
Subtle substance/Essence of the Universe/
Brahman/Purushan/Vastu Brahman

Becoming Self Conscious
Pulsates / Vibrates / Blossoms into

KAALAM/TIME

Kaalam emerges as force of energy, from within the
energy and splits the energy into Paramanu particles
of energy causing into existence the vast subtle energetic space

GUNA (Quality) — **EDAM/SPACE/FIELD** — GUNA (Quality)

LIGHT
ARTHA PRAPANCHAM
(material universe)
Luminous material space

Unified field of Energy and Matter, Conscious
luminous space, it vibrates and turns into

SOUND
NADA PRAPANCHAM
(sound universe)
Sonic material space

EDA VADIVAM/SPATIAL FORM

Material, visual form
ARTHA
with source in OM-LIGHT
अर्थब्रह्मम्
பொருள்

Diverging into two
streams of self
expression namely

Material, aural form
VAAK
with source in OM-SOUND
शब्द ब्रह्मम्
சொல்

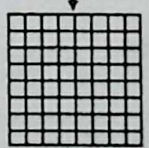
VISUAL FORM - AURAL FORM
PAARKUM VADIVAM - KETKUM VADIVAM

Caused by the
well defined vibration of
light-space (light-rhythm)
quantified into TAALA-UNIT
(frequency of vibration)
(தாளம்)
(Measured Spatial unit)

TIME = SPACE
AURAL FORM = VISUAL FORM
Luminous Visual form occurs at Inner space
Vibrant aural form occurs at Inner space
The resultant
layout for all structures at
the level of Inner awareness.

Caused by the
well defined vibration of
sound-space (sound-rhythm)
quantified into TAALA-UNIT
(frequency of vibration)
(தாளம்)
(Measured Time unit)

Rhythm bound
spatial form.
(Architecture)
(Sculpture)
(Townplanning)



Vaastu Purusha Mandala
8 × 8 = 64

Rhythm bound
sound form.
(Music)
(Dance)
(Poem)

TRI-DIMENSIONALLY EVERY PARTICLE OF SPACE
IS A SUBTLE CUBE OF ENERGY, CALLED CHITRAMBALAM or MICRO-ABODE
within which there is a 'shaft of light' or 'shaft of consciousness' vibrating or
performing a 'rhythmic dance'. This is the dance of the DANCER, GOD SHIVA.

The whole universe is filled with subtle cubes of energy called KARU or BINDU or FOETUS

* Brahman as defined by Mayan, in his astronomical treatise called 'Surya Siddhanta'.

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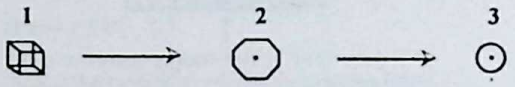
DYNAMICS OF SPACE

(EXPERIENCE turns into EXPRESSION)

CAUSAL ELEMENT is TIME

Space experiences and vibrates into form. The solid cube of energy explodes (poetically it is melting like a wax on heat) and splits itself into a grid pattern called Vaastu Purusha Mandala. This is also the inner order of the universal being. Due to self spin of the Vaastu mandala wave-patterns representing gunas are generated. They are as follows.



Subtle cubical Anu	Polygonal Anu	Spherical Anu
Satva guna	**Rajasa guna**	**Taamasa guna**
(Still)	(Dynamic)	(forceful).

After expression is over, the grid restores itself into a cube of energy attaining stillness or tranquility. Series of such explosions and implosions occur in the inner cube or space. **[What occurs in the inner space also occurs in the outer space.]** This inner manifestation is called enlightenment/vision. This is the form that is repeated or replicated into the world of reality by physical efforts of a traditional Architect. This is SHILPA / VASTU. Hence,

'जगत् सर्वं शिल्पमेव भवति'

सर्वं खल्विदं ब्रह्म

विज्ञानं शिल्प कौशल्यम् • शिलपात् प्रतिमाः जायन्ते

— Certain points to better understand the process —

1. The cube (of energy) is the structure of OM light and OM sound*. This alone experiences and goes into self spin - goes into action - emerges into Time - turns into three basic forms - square, octagon and sphere - technically called Nagara, Dravida and Vesara forms.
2. Experience takes place only when the cube is still and luminous. This is gridless unitary anu, unified form, unified field of energy. The next development is that of the grid in the body of the subtle cube. On this grid, occur all thought-forms very sharply, tridimensionally and in perfect order. This is inner experience or inner vision. This is replicated, into the material world by the Shilpi.
3. The moment, the feeling to express erupts, the manduka grid blossoms into existence. The feeling of expression is consciousness. This is Time (Kaala). It is movement. It is Time that moves into form at subtle inner level and later at gross level.
4. To develop this subtle into gross form, the square mandala goes into self spin producing heat and finally turns into another mandala of 9 x 9 units.
5. The turn of the subtle (8 x 8) into gross (9 x 9) is called 'PRANAVA', which signifies the turn of 'egg into chick'.

8 × 8

वस्तु पुरुष मण्डल
Vastu Purusha Mandala
(MANDUKA GRID)

9 × 9

वास्तु पुरुष मण्डल
Vaastu Purusha Mandala
(PARAMASAYIKA GRID)

This mandala is the plan of the universe (macrocosm) and also of the microcosm. They are tranquil and enjoyable. The Vaastu science has adopted this plan for the house-building, temple building and village and city layouts and creates little universes on the Earth. The polygonal and circular forms are agitative and revolutionary and therefore disallowed in the design of living spaces. The traditional pattern of a house is therefore a paradise on Earth where an individual lives in peace and bliss. This 'paradise lost' is to be re-gained for the spiritual and material prosperity of the entire human race.

□Square is the primal manifest form of the non-manifest. This is 'Sakalapada' / 'Ekapada' / unitary space without grid; With grid laid on it, is designated as VASTU PURUSHA MANDALA, signifying the inherent order in the structure of microcosm and macrocosm. The tri-dimensional cube is the KARU (egg) and this gets magnified into universe. This is taken as the basic form/basic pattern of a house. This is called Garbhagriha or Bindu griha. *OM is verb as it grows into form. OM is an active mono-syllable

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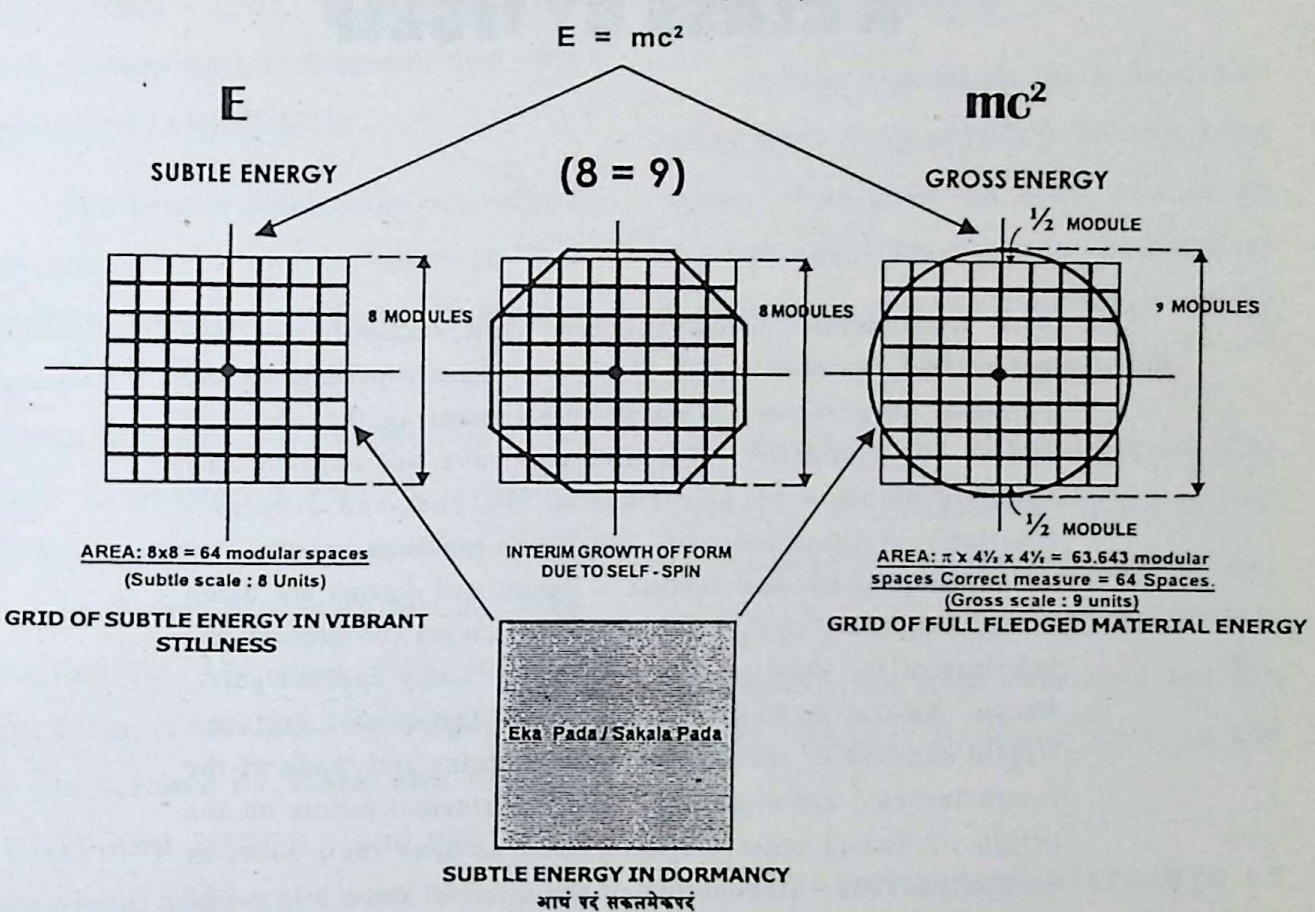
MECHANICS OF SUBTLE ENERGY TURNING INTO GROSS ENERGY

(The turn of subtle into gross.)



THE PRIMAL MANIFEST FORM OF THE PRIMORDEAL VASTU.

IT IS SQUARISH AND OF MINUTEST PARTICLE OF SPACE.

TRIDIMENSIONALLY IT IS THE STRUCTURE OF OM - LIGHT AND OM - SOUND.

TO PUT IT IN MODERN TERMINOLOGY, THESE ENERGY CUBES ARE BUILDING BLOCKS OF THE UNIVERSE AND INFACT, THESE OF THE MATERIAL FORMS OF THE UNIVERSE AS WELL.

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8

VAASTU SHĀSTRA, A CLASS BY ITSELF

The traditional Indian sciences and technologies are collectively named Vaastu Shāstra - These remained as the personal property of Indian Shilpis inhabiting the whole of Indian sub continent - The shāstras have not enjoyed any specific mention by historians of the past and present - Similarly, Āgamas too were not given much prominance as an outstanding cultural science - Vaastu and Āgama are being recognised today as pure sciences influencing the present day scholars of the West to resort to deeper study and analysis - Vaastu shāstras do belong to a separate family of literature - Vaastu shāstras of the South Indian Shilpins and those of the North Indian's are too many - Some historical points on the origin of Vaastu texts - Vaastu shāstras have their roots in **Sthāpatya Veda** - Availability of the primary Vedic text called **Pranava Veda** as mentioned by Veda Vyāsā - Āgama and Vaastu are as old as the cultural tradition of India. These shāstras have brought the invisible Brahman face to face with the worshippers in a Temple.

The Vaastu Shāstras, that have been in vogue from the early times are a class by themselves, inheriting or borrowing nothing from any other source. They are not mere building codes or construction manuals as assumed by non-technical critics. They are shāstras replete with technological materials and measures, based on a unique science of **ENERGY and MATTER, TIME and SPACE & SPACE and SPATIAL FORM,** so far not known to the history of the land of their origin.

All Āgama Shāstras have respected and accepted the science and

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technology of Vastu and Vaastu (वस्तु निश्चयं **Vastu nischayam** as declared by Āgama) and hence, invariably the Vaastu Lakshanas are prefixed to each and every text, the worship methodology having been evolved and elaborated subsequently.

The Vaastu Shāstras have evolved the temple structure as form of God (प्रासादं पुरुषं मत्वा पूजयेत् मन्त्र वित्तमः *'Prāsādam purusham matva pōjayet mantra vitamaha'*) and hence the structure itself is worship worthy. It is said to be **'Viswarōpa', 'Viswa Brahma'**, the cosmic form, expressed in musical proportions. The yard stick, used to give form, is musical octave, governed by the science of **TIME and SPACE, LIGHT and SOUND** - and expressed into visual and aural forms. This is the basic science of all **Vaastu Shāstras,** owned and handled by Indian Shilpins.

A glance at the body of literature, owned and used by the shilpins, would convince beyond doubt, that it enjoys an independent and unique status of a Veda known among shilpins as **STHĀPATYA VEDA.** This is a Veda that has identified Brahman, the Potential energy and examined it at Kinetic level, and evolved a technology **to interpret or create the potential form in visual terms.**

Recent researches show, that they must have originated from the land mass, that had existed south of Kanyakumari, known today as **Kumari Continent,** that had suffered drifts three times across the millennia.

Further, the progenitor of this Science and Technology is identified to be **MAYAN** adored in *Rāmāyana, Mahābhārata and Silappathikaram.* Evidences are also available for his origin, during Sangam days, in the deep South.

The corpus of literature on Scientific Vaastu as recorded in the Mānasāra Vaastu Shāstra is unique and vast. There were 32 Shāstras, as enumerated below.

1.	विश्वकर्मीयम्	*Viswakarmēyam
2.	विश्वम्	Viswam
3.	विश्वसारम्	Viswasāram
4.	प्रबोधम्	Prabhodham

* These Shāstras only are available now.

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5.	वृत्तम्	Vruṯam
6.	मयमतम्	*Mayamatam
7.	त्वष्टातन्त्रम्	Twashta-Tantram
8.	मनुसारम्	*Manusāram
9.	नलम्	Nalam
10.	मानविधि	Māna Vidhi
11.	मानकल्पम्	Mānakalpam
12.	मानसारम्	*Mānasāram
13.	बृहश्रुतम्	Bahushrutam
14.	शृष्टम्	Srushtam
15.	मानबोधम्	Māna Bhodham
16.	विश्वबोधम्	Viswabhodham
17.	आदिसारम्	Ādisāram
18.	विशालाक्षम्	Visālāksham
19.	विश्वकाश्यपम्	*Viswakāsyapam
20.	वस्तुबोधम्	Vastubhodham
21.	महातन्त्रम्	Mahātantram
22.	वास्तुविद्यापति	Vāstuvidhyāpati
23.	पारासरीयकम्	Pārāsariyakam
24.	कालयूपम्	Kālayūpam
25.	चैत्यम्	Chaityam
26.	चित्रम्	Chitram
27.	आवर्यम्	Āvaryam
28.	साधकसार संहिता	Sādhakasāra Samhita
29.	भानुमतम्	Bhānumatam
30.	ऐन्द्रमतम्	*Aindramatam
31.	लोकघ्नम्	Lokaghnam
32.	सौरम्	Souram

The Vaastu texts that were prevalent in North India as well as in other states of India have a common concept, theory or grammar just as we have a common grammar for dance and music, though certain external and physical variations are noticeable. They are of course regional variations of not much importance. Fortunately, the spirit remains the same. The pan Indianness of Vaastu tradition is further clear from the fact that all Indian shilpis belong to a particular work-group or community called Viswakarmas. Their Prākrit name is khammar / khammalar / khammakar for karmar, karmalar or karmakara. Under this community there flourished guilds of shilpis, with leaders for each, referred to as Manu, Maya, Twashta, Shilpi and Viswajna. Today they all come under a national association called Akhila Bharata Viswakarma Mahajana Sabha/ Sangha with the President in Delhi and Working Presidents in each of the Indian states. The historians are yet to know this erstwhile organised sector.

The shilpaic texts do not contain the names of any particular chakravartin or raja of any part of the

* These Shāstras only are available now.

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Indian sub-continent. The names of Pallava, Chera, Chola, Pandya, Hoysala, Ashoka, Gupta, etc. do not appear at all any where in the texts though the authorship of one Vaastu text called Samarāngana Sutradhara (10th Century A.D.) is attributed to King Bhoja. These attest to the remote antiquity and independent origin, existence and role of Vaastu-Shilpa tradition.

Let us now have a look at the Vaastu texts handled by the Viswakarma-shilpis of North India. All the texts are available.

1.	वास्तु राजवल्लभम्	Vāstu Rājavallabham
2.	समराङ्गण सूत्रधारम्	Samarāngana Sūtradhāram
3.	रूपमण्डणम्	Rupamandanam
4.	कोदण्ड-मण्डणम्	Kothanda-mandanam
5.	शिल्प प्रकाशम्	Shilpa Prakāsam
6.	अपराजितपृच्छा	Aparājita-pruchcha
7.	प्रतिमा मान लक्षणम्	Pratimā-Māna-Lakshanam
8.	क्षीरार्णवम्	Kshērārnavam
9.	दीपार्णवम्	Dēpārnavam
10.	शिल्प शास्त्रम्	Shilpa shāstram

There are non listed texts but all of them are available. They are as follows:

1.	वास्तुविद्या	VāstuVidyā
2.	मनुष्यालय चन्द्रिका	Manushyālaya Chandrika
3.	सारस्वतीय चित्रकर्म शास्त्रम्	Sāraswatēya Chitrakarma Shāstram
4.	ब्राह्मीय चित्रकर्म शास्त्रम्	Brāhmēya Chitrakarma Shāstram
5.	सकलाधिकारम्	Sakalāddhikāram
6.	शिल्परत्नम्	Shilpa Ratnam
7.	सनत्कुमार वास्तु शास्त्रम्	Sanatkumāra Vāstu Shāstram
8.	शिल्परत्नाकरम् (मयवास्तु)	Silpa Ratnākaram (Tamil)
9.	सर्वार्थ शिल्पचिन्तामणि	Sarvārtha Silpa Chintāmani
10.	शिर्पच्चेन्नूल्	Sirpachennōl (1977) [Sthapatis]

In **Manusara,** we have references to the existence of 18 texts. They are as listed below:-

1.	ईशानम्	Esānam
2.	चित्रकाश्यपम्	*Chitra Kāsyapam
3.	प्रयोगमञ्जरी	*Prayoga Manjari
4.	पेरूहितम्	Peruhitam
5.	बौद्धमतम्	Bouddha Matam
6.	गौतमम्	Goutamam
7.	कुलालम्	Kulālam

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* These Shāstras only are available now.

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8.	वाशिष्टम्	Vāsishtam
9.	मनोकल्पम्	Manokalpam
10.	भार्गवम्	Bhārgavam
11.	मार्कण्डम्	Mārkandam
12.	गोपालम्	Gopālam
13.	नारदीयम्	Nāradēyam
14.	नारायणीयम्	*Nārāyanēyam
15.	काश्यपम्	*Kāsyapam
16.	चित्रयामलम्	Chitrayāmalam
17.	चित्रबाहुल्यम्	*Chitra bāhulyam
18.	देशिकम्	Desikam

Recently one Vaastu shāstra, written in prakrit language (Maharashtree) has been published in Pune with the editorship of Dr.R.P.Kulkarni of Jnana prabodhini, an eminent Sanskritist and researcher. The actual name of the shāstra is वास्तु सार प्रकरणम् Vāstu sāra prakaranan[1]. It is translated by the above scholar into English with illustrations at appropriate places. While commenting on certain passages Dr.Kulkarny brings in passages from Varahamihira, Mayamata and Mānasāra, thereby tradition. The subject matter conforms to the treatises mentioned above. There has been a talk among traditional sthapatis that all of the treatises on Vaastu had been composed in Prākrit and later on transferred to Sanskrit. It is now very clear from the existence of a Vaastu text all in Prākrit. During the trasition period, perhaps the shilpis did not and here to grammatical aspects and hence metrical and grammatical blessishes abound. Yet, it may be proudly observed that in the material and visual expressions, there are no grammatical or matrical faults! They are superb and astonishing in a number of ways. It is a treatise on Jain art and architecture. At this context it is worth mentioning thta Jainism is said to be the pre-vedic religion, and if so the antiquity of Vaastu tradition also goes beyond vedic period. As found in the list of treatises of Vaastu, of South Indian origin, there are a few important ones such as **'Chaityam'**, **'Bouddhamatan'**, **'Gautamam'** said to have been in force in the South. There is also a treatise on Buddha Pratimā lakshanam, a unique text where the Buddha pratima an independent elaboration of uttama dasa tala lakhana (of Mānasāra) with Samudrika lakshana

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[1] Published by Jnāna Probodhini, Pune, the original prākrit text being published by Shri.Thakkuva Feru, a Sanskritist, hailing from Kaliana near the town Daadri in Mahendraghar District, Haryana State.

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highlighted, I discovered an exact replica in the reclaiming posture of Buddha image, in pollanurva of Srilanka. The treatment of the idol, in stone, be speakes of the hand of Pallava sculptors.

Another treatise of Buddhist origin is also brought to light by Srilankan Government. It is a book on Vaastu Vidya titled as **'Manjusri Vaastu Vidya Shāstra[1]'**. This is a voluminous work with good number illustrations. What is striking in this text is that, it is Sanskrit, not in Paali, about 90% of the textual matter based on South Indian Vaastu while the description of the monuments being creative and conforming to the Buddhistic system.

While this is actually the corpus of Vaastu-Shilpa literature that had existed during the post vedic period, it may be added that there are certain Upanishads of the same period, said to have been associated with Atharvana Veda. This Atharvana Veda is regarded as the Jyeshta Putra, signifying thereby that Atharvana Veda is the Primary source of the three other Vedic Samhitas namely, Rik, Yajus and Sama that we have today and current all over the Indian subcontinent.

The Upanishads referred to above are

शिल्पविद्यारहस्योपनिषत्
'Shilpa Vidyārahasyopanishad'

and

वास्तु सूत्रोपनिषत्
'Vāstu Sūtropanishad'

Apart from these, there is one more Upanishad, namely, **Amrutha bindopanishad,** whose scientific material conform very much to the concept of Sound and Light as elaborated in the Mayonic Science and Technology, the essentials of which are noticeable in the Mayan's **AINTIRAM** published in 1986 by the **Directorate of Technical Education, Government of Tamilnadu,** the merits and relevance of the Sutras being upheld by scholars. This Aintiram is in chaste technical Tamil, belonging, as mentioned in the text itself, to Sangam days. This Mayan is discovered today, to be not as a puranic being, but as a

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1 Published by the Archaeological Survey of Srilanka in 1995, edited with critical notes by Sri M.H.F Jaya Suriya, Leelananda Prematilleke and Roland Silva.

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man who walked on earth with flesh and blood. Maha Kavi Valmiki, Veda Vyāsa and Kerala Prince Elango besides other Puranic literature extol him as a great scientist, technologist and a great poet of the Danavas. Veda Vyāsā crowns him with the title **Vishwakarma**. Certain scholars identify him in the imagic form of Dakshinamoorthy (தென்னவன்)[1]. There is a possibility of identifying him as Vedic Indra also, because 'Indra Vizha' (Indra festival) used to be an annual feature only in Tamil culture in the distant past, as referred to in the Tamil epic Silppathikaram. This stands revived today. Further there is a Vaastu text, 'Aindram' in the tradition. Tamil tradition mentions him as மாஇந்திரன் - மயேந்திரன் Mayendran and the mountain where he lived, as மயேந்திர மாமலை Mayendra Māmalai in Tamil and Mahendra parvata in Sanskrit. This mountain is also identified as one that had existed in Kumari continent. This interpretation is supported by Thiruvachakam of Manicka Vasagar, a Saiva Saint of Tamilnadu.

மன்னுமாமலை மயேந்திரம் அதனில்
சொன்ன ஆகமம் தோற்றுவித்து அருளியும்
Mannu māmalai mayendiram adanil
sonna āgamam thotrruvitharuliyum

— in Keerti Thiru Ahaval of Thiruvachakam

It means that 'Āgamam' recited or preached on the great mountain of Mayendram was unearthed and given back into the hands of the Tamils. This alludes to the deluge and consequent recovery of the cultural science with divine intervention. Further evidence to this effect is found in the name of a mountain called Mayendra giri மயேந்திர கிரி and a place named as மயன் பறம்பு Mayan parambu in Kanyakumari district, the southern tip of the Indian sub-continent. It is heartening to note that Dr.S.Padmanaban of Nagercoil, a member of the Council of Historical Research, under Archives Department, Tamil Nadu, is on it and more evidences will be forthcoming in the near future.

Mayan is also identified to be the original author of Surya

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1 Certain Tamil scholars feel that he must be the ஒளி (arivin mudalvan) "the first and the most intelligent being" noted in Tolkappiam, the celebrated grammar of the Tamils. The shilpi tradition identify him as Ādi Sankara (मयो भवाय शङ्कराय च - श्रीरुद्रं) Dakshinamurthi Ashtakam of Sri Sankara Bhagavat Paadal unravel the Vedic concept in the iconographic representation of Dakshinamurthy. Present day vedic scholars worship him today in idol form in their Āshrams. It needs further research.

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Siddhānta, the most ancient treatise on Astronomy, his name occurring in the text itself as Mayasura. Scholars have not taken efforts to identify him but simply branded him in a slang way as an Asura, dismissed his authorship and scholarship and attributed it to a later day astronomer, not knowing that the term 'asura' points to one who is intellectually and spiritually strong and supreme. On the contrary, Indra and Varuna, the Vedic Gods, are classified under asura group. Why this and how this? Further, the medical treatises on Siddha system, now being researched into by Dr.S.P.Sabharathnam, Director of the Indian Institute of Indology, Chennai, refer to him frequently as a Siddha as well as the names of his followers in the Siddha system of health care. The available **'Siddha literature'** are all in Tamil.

Further researches into Mayonic literature reveal that he had contributed the following technical works numbering twelve, equating each of them to the twelve vowels of the Tamil language.

1. **ஓவியச் செந்நூல் Ovia Chennool** — Treatise on drafting and painting.
2. **சிற்பமாச் செந்நூல் Sirpamā Chennool** — Treatise on Iconometry.
3. **கட்டிடச் செந்நூல் Kattida Chennool** — Treatise on Architecture.
4. **நிலமனைச் செந்நூல் Nilamanai Chennool** — Treatise on House building based on the quality of land.
5. **மனைநிலச் செந்நூல் Manainila Chennool** — Treatise on Land based on the nautre of house building.
6. **வானியல் செந்நூல் Vāniyal Chennool** — Treatise on Astro-physics.
7. **பெருநடச் செந்நூல் Perunata Chennool** — Treatise on the Divine Dance.
8. **முலிகைச் செந்நூல் Muligai Chennool** — Treatise on Herbs.
9. **கணிதமாச் செந்நூல் Ganitamā Chennool** — Treatise on Mathematics.
10. **மரக்கலச் செந்நூல் Marakkala Chennool** — Treatise on Ship building.
11. **விண்கலச் செந்நூல் Vinkala Chennool** — Treatise on Space Ship.
12. **ஏழிசைச் செந்நூல் Elisai Chennool** — Treatise on science of Music.

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One would notice, in the list furnished above, a technical work named **ஓவியச் செந்நூல் (Ovia chennool),** on sketching and painting. The existence of this particular work is also mentioned in one of the five Kavyas of the Tamil tradition namely **Manimekalai (மணிமேகலை).**

நாடக மகளிர்க்கு நன்கனம் வகுத்த
ஓவியச் செந்நூல் உரைநூற்கிடக் கையும்
கற்றுத் துறைபோகிய பொற்றொடி நங்கை

This work, being purely technical in the treatment of the subject matter and of a unique style, even the Tamil scholars and practitioners of the period of its emergence, were not able to comprehend and on that account, it lay unused for years. So says the commentator of the epic. However, the second one **சிற்பமாச் செந்நூல் Chirpamā chennool** is available with me and this will see the light of day during 2001. The former is the science and technology of two dimensional visual forms and the latter, of tridimensional material forms. Basically, they are based on a common science and grammar of visual forms.

As regards other treatises, numbering twelve, all in Tamil, are available in pieces. Yet they are intelligible when read with the Sanskrit texts. They are available with me. They will also be published subsequent to Sirpa-ma-Chennool.

What is very significant in these texts is this. The existing Vaastu Shilpa texts in Sanskrit are mutilated and interpolated and exist in pieces carrying the science of **Energy and Matter, Time and Space, Space and Spatial form** that I have discussed in my books/articles, underlying every aspect of the Vaastu technology. Such a science would reveal itself to one who is deeply and consciously involved in the application of the principles in life situations. This is the reason why **ஓவியச் செந்நூல் Ovia chennool** had gone into disuse and oblivion. What is revealing in this context is that those aspects of science found missing in Sanskrit texts, is found in full measure in the Tamil texts as well as in Aintiram. But the technological portions of the text are exactly one and the same! So, Aintiram, in Sutra form, is held in the tradition as the Brahma Sutra of the science of visual and aural forms.

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At the top of all, there is one more thing to be brought to scholarly notice, that is, the existence of a Veda called Pranava Veda प्रणव वेद in the very very remote past, attested as such by Veda Vyāsā himself, in Bhāgavatam.

"एक एव पुरा वेदो प्रणवः सर्ववाङ्मयः"

"eka eva purā Vedo Pranavaha sarva vāngmayaha"

(9th Skandha, 14th Chapter, Sloka 48 of Bhāgavatam)

The meaning is that there was only one Veda called Pranava Veda in the remote past. This Veda is claimed to be the 'Veda' of the shilpis of India irrespective of their regional placement in the Indian subcontinent. The Skandam also echoes the same Veda, as held and practised by the Shilpis.

अथर्व शीर्षोपनिषद् makes mention of **प्रणव** as **ओङ्कार** as all pervasive substance - as Sukshma and Sukla.

This particular 'Pranava Veda' is again in chaste technical Tamil, which would be intelligible to Shilpins who have researched into the Sanskrit and Tamil texts available today. In this context, the **Mayamatam** of Mayamuni is the only text where the principles dealt with therein go very close to the Tamil texts, particularly to the Pranava Veda. In short, this Pranava Veda appears to be the primary source for all vedic knowledge prevalent in the South in the remote past, and during Sangam days, before the continental drift or deluge, that had over taken Jamboo Dweepa (நாவலந் தீவு). This, I believe, after the deluge, should have spread all over the subcontinent and also to other parts of the globe by those who migrated to the north in search of safe places. This needs further research. I hear that similar research is going on in the overseas Universities.

Before closing this chapter, one sad historical fact is brought to the notice of scholars of Sanskrit and of Tamil for further research.

While the Vaastu shāstras listed in the foregoing pages are basic technical treatises written in Sanskrit, no mention about the existence of Vaastu or Āgama literature is made in the History of Sanskrit literature authored by Prof.Keith and by other local scholars too, later on. Why this scholarly neglect? No mention atleast as appendix or as a reference under foot notes exists even today. Observing that

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Vaastu is becoming wide spread, the scholars now come to say that Vaastu is part of Atharvana Veda. If Vaastu merits such an association with a big veda does not Vaastu deserve to be brought under Sanskrit literature? What is the secret of this marginalization? I asked my Sanskrit professor 40 years back, in my class, the same question. He consoled me saying it would get included before long. After retirement I met him and put the same question but he was sad to say no and could do nothing in this respect. A close study of Atharvana Veda has revealed that there no specific mention is made about the science or technology that I have been referring to repeatedly and untiringly in all the chapters of this book. It is heartening to find that Veda Vyāsa, the honest scholar of the past makes mention of Sthāpatya Veda not along with Rig, Yajus, Sama and Atharvana but away from this group. This is classified under another group of Vedas namely Gandharva Veda, Dhanur Veda, Ayur Veda and Sthāpatya Veda.

Bharatamuni, who authored Nātya Shāstra, appears to be the first to revolt against this scholarly neglect and injustice, which is evident from the first chapter where he re-establishes the eminence of Nātya Shāstra as a Veda - Nātya Veda.

Inspite of this, the Vaastu and Āgama have come to the forefront, of late and engaging the attention of the present day scholars of the West and the East. This is the effort made by overseas scholars, not by our own.

I would like to draw the readers' attention to the first chapter of this book where this Vaastu Veda or Sthāpatya Veda is extolled as a treatise on a unique science of Brahmajnāna and a unique technology of Brahma-srishti. It is a fact, not exaggeration.

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9

VAASTU - SHILPA AS ADVANCED SCIENCE and TRADITIONAL TECHNOLOGICAL PRACTICE

Reaching already the pinnacle of glory in science and technology, the scientists of the Western hemisphere move further upward with the spirit of adventure - Researches in France, Australia as also in European and American universities and labs are being continued to explore Nature beyond the frontiers of material science and achievements - What is interesting today is that their findings are coming closer to the Eastern science of SthapatyaVeda which links Space with Earth and Earth with Space - Vaastu shastra is an applied science - Certain excerpts from the traditional Eastern genius are recorded here under, side by side with those of the West - They are not exhaustive but restricted to Art and Architecture - Certain Tamil works of the Sangam days are discovered and the scientific material discussed therein is furnished to add another dimension to the already existing ones in the Indian tradition - Till yesterday Indians rightly looked for occidental recognition for all the discoveries of the East - Noble prize has been the symbol of international recognition and reward - Now having looked at the East with deeper penetration into the East's undying culture, the West showers open encomium and conducts experiments making use of modern precision instruments - The age old monuments of the world are re-examined and their dates and significance re-interpreted - Age of the Vedas are re-explored and re-assessed - Agamas and Vaastu Shastras are being re-read and re-evaluated - A few reviews of Indian and overseas scholars are quoted hereunder for readers' information and appreciation.

Vaastu Vidya is Brahma Vidya - Pratimajnana is Brahmajnana. Some scientific theories quoted in the body of this text are gathered and re-stated with added emphasis as they go beyond the frontiers of material sciences- Scientific theories and technological material are integrated in the traditional science, be it poetry, music, dance, sculpture or architecture.

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1. Prof. Percy Brown in his **History of Architecture of the Hindus:**
   - ❋ Architecture is the matrix of civilization.
   - ❋ Architecture is frozen music.

2. Mayan, the scientist, architect and poet of Sangam days says (10,000 BC):
   - ❋ Architecture is the supreme achievement of mathematics.
   - ❋ Mathematics is rooted in the dynamism of Absolute Time.
   - ❋ Time and Space are equal.
   - ❋ Time is one of the subtle elements of Space (aakasa).
   - ❋ Time is the causal element of all objects of the universe.

3. Sakalaadhikara (a treatise on iconometry) of Agastya says:

   सकल निष्कल मिश्र विभागतः त्रिविधमेव वपुः परमेष्ठिनः ।
   विधिमिमं सकलस्य यथोदितं शशिधरेण तथा कथयाम्यहम् ।।

   Sakala nishkala misra vibhaagataha trividhameva vapuhu Parameshtinaha vidhimimam sakalasya yathoditam shashidarena thatha kathayāmyaham.

   The Supreme Being, the amorphous (**निष्कल**) one passes, through two more stages, mixed the morpho amorphic (**सकल निष्कल**) and the one with form, morphic (**सकल**). The first one is invisible, whereas the last one is visible and that in between is the mixed. And the last one, the visible is of two kinds, one mobile and the other immobile. Agastya establishes a connection between the invisible and the visible, and mobile and immobile.

   The iconometrical measures are related to the visible of the invisible. The invisible is turned into visible form. The construction of human form falls under architecture and music. Vaastu and Shilpa are synonyms. The Taala pramana used in the Vaastu-shilpa texts are Kaala pramana - Units of Time turned into units of space.

4. Architect and scientist of Australia Mr.Robert Lawlor in his **Sacred Geometry:**
   - ❋ "The fundamental nature of the material world is knowable only through its underlying patterns of wave forms".
   - ❋ "Both our organs of perception and the phenomenal world, we perceive of form[1] and proportion[2]. **Therefore, when many ancient cultures chose to examine reality through the metaphors of geometry and music** (music being the study

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1 Form made up of spaces.

2 Proportion means the measures caused by rhythm in Nature (this is identified as time measures in Vaastu Shastra).

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of the proportional laws of sound frequency) **they were already very close to the position of our most contemporary science".**

- ❋ "The point of view of modern 'force-field' theory and wave mechanics corresponds to the ancient geometric - harmonic visions of universal orders as being an interwoven configuration of patterns".
- ❋ Robert Lawlor quotes Bertrand Russel in this connection as saying **"what we perceive as qualities of matter, are actually differences in periodicity[1]".**

5. Mayan, the scientist, architect and poet of Sangam days:

- ❋ All objects of nature are unified entities (forms) of energy and matter.
- ❋ The free space is the unified field of energy and matter and source of all forms that we see in material world.
- ❋ There are two OMs - OM Light and OM Sound, the former is the source of all visible objects and the latter, the source of all aural forms.
- ❋ All material forms of the universe are musical forms or have taken shape on musical rhythm or musical scale.
- ❋ Time creates, sustains and destroys all, so created.
- ❋ The primal manifest form of the unmanifest is square (primal wave pattern).
- ❋ The primal square pattern is designated as the diagram of embodied energy - Vaastu Purusha Mandala.
- ❋ The free space is packed with cubical atoms of energy. They are building blocks of the structure of the universe.
- ❋ The cube is micro - abode called Sittravai சிற்றவை/சிற்றம்பலம், mini hall in Tamil.
- ❋ Within the hall there is a vertical luminous shaft called Brahma Sutra/ஒளி நூல் Oli nool.
- ❋ This Olinool is shaft of consciousness. Also called மூலத்தூண், மூலஸ்தம்பம் Moolathoon/Moolasthambha.
- ❋ This shaft of consciousness vibrates in a particular order called rhythm. This order is its nature.

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1 Time taken to grow into spatial forms.

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- This rhymic vibration of the shaft of consciousness is the dance of Shiva, the Space.
- The micro space, in the cubical shape is foetus, Garbha or Bindu. This is known as விங்கரு Vinkaru in Tamil.
- This microbode is the repository of light and sound.
- The free space is Light and the Light is Moolam or source of the universe and universal forms. Light (ஒளி Oli) is Brahman, Atman, Vastu Brahman நுண்பொருள் Nun porul.
- The embodied energy is Vaastu Brahman / Vaastu Purushan. The space enclosed in a building is Praasaada Purushan - energised building - Building is a living organism,built of musical units of measure.

  (Additional information is provided in the chapter on Genesis of Art and Architecture.)

6. Vitruvius, the Roman Architect on craftsmanship and scholarship.

- Those who have aimed at acquiring manual skill without scholarship have never been able to reach a position of authority corresponding to their pains, while those who have relied only upon theories and scholarship were obviously hunting the shadow, not the substance. But those who have a thorough knowledge of both like men aimed at all points have the sooner attained their object and carried authority with them.

The traditional architect is a designer and builder - a scholar cum craftsman.

Qualifications of the Sthapatis.

In the field of design and execution of architectural buildings, what we see today is, that there are two groups of specialists, namely Architects and Engineers, the former group preparing architectural designs as well as linear and perspective drawings, while the latter executing as per layouts and elevational details provided by the former, with due attention to structural stability and longevity. The two groups of experts have separate training institutions called **'College of Architecture'** and **'College of Engineering'.** As such, each of the group has a separate association named **Indian Institute of Architects** and **Indian Institute of Engineers**, with respective areas, rights and responsibilities defined precisely. This compartmentalization of human skills is after the Western mode.

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But in the Vaastu tradition of Art, Architecture and Town Planning, the Sthapati is one, qualified in all the aspects of creation namely architectural, as well as engineering designs and execution. In short, the Sthapati is an architectural engineer. Added to this, a Sthapati is a sculptor too. All these three branches are well coordinated and fused in one. There were, therefore, no separate individual associations for artists, architects and engineers. Instead, all of them functioned under one roof called 'Guild' (समूह Samooha), the Chief being the Sthapati, who is responsible for the resultant harmony, beauty and stability of the edifices raised by him assisted by his followers. Understanding this pattern of work and responsibility, Dr.P.K.Acharya of Allahabad, who produced seven volumes on 'Architecture of Manasara', has translated the term 'Sthapati' as the Director General of Architectural constructions.'

स्थापनाधिपतिः यस्मात् तस्मात् स्थपतिरुच्यते ।।

In the Vaastu Shastras, prior to the chapter on "Units of measurement and measuring instruments" (मानोपकरण), one would find a detailed account of the qualification of Sthapatis and Shilpis, the former as experts in all the branches of art and architecture, while the shilpis as experts in individual area of work.

One thing, that we have to point out and remember in this context is this. Of the two major texts on Vaastu namely, Mayamatam and Maanasaram, the text of Maanasaram makes reference to 'knowledge of Veda' as an essential pre-requisite for Sthapati and his assistants namely Sutragrahi, Vardhaki and Takshaka (experts in applying shastraic measures, joiner of individual parts or builder and the last one, the carver). But in Mayamata Vastu Shastra (not Vaastu shastra - please note the difference in title of the text), there is no mention about Sthapati to have Vedic knowledge. Why this omission in Mayamatam while there is specific mention in Manasara? The traditional interpretation is that Mayamatam is the direct offshoot of Sthapatya Vedam. While Manasaram is of later origin, Mayamatam is indeed the original technological treatise with a science base implied in the principles, then and there, though not discussed logically and separately. To elaborate and emphasize, in the Indian work culture, the technology is based on Science and not the science built upon technology. That is why the Vaastu Shastras are not well intelligible to pandits and researchers with no knowledge of the science of Vastu and Vaastu.

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Apart from this, the shilpi of Indian origin, one could have observed, saying that they had had a Veda named "Pranava Veda" in the remote past, branching into four Upa Vedas namely, Sabda Veda (Poetry), Gandharva Veda (Music), Natya Veda (Dance) and Sthapatya Veda (Art and Architecture). All these four Vedas are grouped under a common category, since they have a common grammar or theory of rhythms, called Taalamana while the Pranava Veda is the source text dealing with all the Upa Vedas prefaced with the science, mentioned above.

From this, it must be clear that Sthapatis and Shilpis have been Vedic Scholars - ofcourse, of different mould and category, called collectively as 'five fold Vedas'. This concept is iconographically represented in the five headed Vishwakarma, again the principal Vedic Deity. While this is the picture, one should not forget that the four Vedas - Rig, Yajus, Sama and Atharvana - are not given up or marginalized by the later day Vaastu Shastrins, with respect to their importance. In all the rituals performed by the Sthapati, it is specifically mentioned that 'Vedic chantings' should precede and follow all activities particularly connected with Vaastu Shanti, Silanyasa, Garbhanyasa, Moordhneshtikanyasa and Nayanonmeelana. Some feel that they must be post vedic interpolations.

Now, let us go into the qualifications of Sthapatis and Shilpis.

Mayamatam

स्थपतिः

स्थपतिः स्थापनार्हस्यात् सर्वशास्त्र विशारदः । नहीनाङ्गोऽतिरिक्ताङ्गो धार्मिकस्तु दयापरः॥
अमात्सर्योऽनसूयश्चातन्द्रितस्त्वभिजातवान् । गणितज्ञः पुराणज्ञः सत्यवादी जितेन्द्रियः ॥
चित्रज्ञस्सर्व देशज्ञश्चानन्दात्मा अलुब्धकः । अरोगी चाप्रमादीच सप्तव्यसनवर्जितः ॥
सुनामाढ्यवुद्धिश्च वास्तुविद्याब्धि पारगः ।

स्थपतेस्तस्य शिष्योवा सूत्रग्राही सुतोऽथवा । स्थपत्याज्ञानुसारी च सर्व कर्म विशारदः ॥
सूत्रदण्डप्रपातज्ञः मानोन्मान प्रमाणवित् । शैलदार्विष्टकादीनां सूत्रग्राहि वशात्तुयः ॥
तक्षणात् स्थूलसूक्ष्माणां तक्षकस्तु कीर्तितः । मृत्कर्मज्ञो गुणीशक्तः सर्वकर्म स्वतन्त्रकः ॥
तक्षकस्तक्षणेनास्मिन् उपर्युपरि युक्तितः । वृद्धिकृत् वर्धकिः प्रोक्तः सूत्रग्राह्यनुगस्सदा ॥
कर्मणो निपुणाश्शुद्धाः वलवन्तो दयापरः । गुरुभक्ताः सदाहृष्टाः स्थपत्याज्ञानुगस्सदा ॥
तेषामेव स्थपत्याख्यः विश्वकर्मेति सम्स्मृतः । — मयमत वस्तुशास्त्रे

The **Sthapati** is one qualified with a right to establish buildings. He must be well versed in all sciences. He must be just and compassionate. He must be free from envy and not envied by others.

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He must be handsome and free from physical deformity. He must be a mathematician with knowledge of history of the land. He must be straight forward and capable of controlling his senses. He must be a good draftsman be widely travelled. He must be generous and not miserly. He must be free from diseases and possess unblemished character. He must be free from seven types of vices. He must have a good name and be strong willed. He must have crossed the ocean of the science of Architecture.

The **Sutragrahi**, is either his son or his disciple. He always follows the directions and instructions of the Sthapati. He is skilled in all the arts. He must be an expert in applying Shastraic measures and in the use of measuring instruments. He must be an expert marker. He must be well experienced in the application of length, breadth and depth on every member to be carved and to go into the construction.

The **Takshaka** is one who works on materials like stone, wood and brick into desired sizes and forms. He is experienced in masonry work. He must be virtuous and capable of under standing his role in the profession. **Vardhaki** is an expert in jointing works. He follows the dictations and directions of Sutragrahi.

All the three should be active, skillful, pure, strong and compassionate with a high sense of adherence to their master's guidelines. They should always be vibrant and happy. To them, their master is Vishwakarma.

Manasaram

स्थपतिः स्थपनायार्हः [1]वेदविच्छास्त्रपारगः । स्थापनाधिपतिर्यस्मात्तस्मात्स्थपतिरुच्यते ॥
स्थपतेश्चाज्ञया सर्वे सूत्रग्राह्यादयः सदा । कुर्वन्ति शास्त्रमार्गेन वास्तु वस्तु प्रयत्नतः ॥
स्थपत्यादि चतुर्वर्णः शिल्पिभिः परिकीर्तितः। आचार्य लक्षणैर्युक्तः स्थपतिर्नामधीयते ॥
श्रुतज्ञः सूत्रग्राहीच रेखाज्ञः शास्त्रवित्तमः । विचारज्ञः श्रुतज्ञश्च चित्रकर्मज्ञो वर्धकिः ॥
तक्षकः कर्म वित् सभ्यो बलबन्धू दयापरः । श्रुतिशास्त्र प्रकर्तव्यं सर्वलक्षणमुच्यते ॥

— मानसार वास्तु शास्त्रे

Sthapati is one who is well versed in all sciences. He is also versed in Vedas. He is entitled to design and establish buildings. **Sutragrahi**, **Vardhaki** and **Takshaka** are basically master craftsmen, but Sthapati keeps overall control. He holds the status of a teacher and a director.

Sutragrahi is an expert draftsman and versed in sciences and Vedas. Vardhaki is also an expert draftsman, researcher and well studied in

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1 शिल्पकलापं स्वयं कर्तं कारयितुं च यः शक्नोति सः स्थापनार्हः ॥

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Vedas. Takshaka is an expert in carving works and one with strong numerical following. He is merciful. He is also studied in Vedas.
It is to be understood now that, it is because of the concerted effort and involvement of such highly qualified and organised team of experts that all our architectural monuments in India look well designed and built, braving time and disasters. They are visually pleasing, spiritually satisfying and elevating!

The above scientific statements have given brith to a unique technology called Vastu Shastra as well as Vaastu Shastra. The science part of Vaastu shastra is Vaastu Veda or Sthapatya Veda.

There are 3 more Vedas of the Shilpi tradition namely Sabda Veda, Gandharva Veda and Natya Veda corresponding to Eyal இயல் (poetry), Esai இசை (music) and Natam நடம் (dance). The Sthapatya Veda is the science of art and architecture. The former three are governed by Kaala mana/Taala mana (time units) and the last one is based on rhythmic space-measure. Time unit is converted into space unit, represented by the application of energy grid in a building.

The temple structures, imagic forms, town and village spaces and all buildings of the Vaastu tradition are based on the theory of rhythm and hence belong to one and the same family. Hence called five fold Tamil - ஐந்தமிழ் (Iyen Tamil).

❋ In Mayamata Vastu Shastra, available in Sanskrit language, Mayan, the original author and tradition builder has made a statement that the space enclosed in a building vibrates in an order or rhythm just like a human being, thereby implying that a building is a living organism

प्रासादादीनि वास्तूनि वस्तुत्वात् वस्तु संश्रयात्।
तान्येव वस्तुरेवेति कथितं वै वस्तुविद्भुधैः ॥

Praasaadaadeeni vaastooni vastutvaath vastu samshrayaat;
taanyeva vastureveti kathitam vai vastu vidbhudaihi.

The meaning is that buildings are Vaastus (temples and residential buildings) - Vaastus by virtue of the space being enclosed are indeed vastus. This means, that Vastu, the energy, is contained in a building. On that account it is not merely Vaastu but it is Vastu too. It implies clearly that subtle energy is equal to gross energy. In other words that space, the subtle or free energy contains matter and matter in turn contains energy. Hence buildings are called

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Praasaada Purusha meaning, building associated with energy.

❋ Shilpa Ratna of Sri Kumara, in the chapter on Praasaada Lakshana, makes a statement to further confirm this scientific fact in a sloka-

प्रासादं पुरुषं मत्वा पूजयेत् मन्त्रवित्तमः

Praasaadam purusham matva poojayet mantra vittamaha".

The priest, well versed in Mantras, should look upon the temple structure as embodied energy and offer or perform pooja.

❋ Speaking about the birth of a letter, Tolkappiam, the Tamil grammar makes a specific reference to a fact of science that vowel and consonant are energy and matter, the unification of which gives rise to aural and visible akshara - letter. **உடம்புடன் உயிர் வந்து ஒன்றுவது இயல்பே.** The merging of life energy with the material body is an event that occurs in nature.

This fact of science is based on a naked scientific truth expressed by Mayan as **"மெய்யொலி உயிரொலி சிவணுதல் இயல்பே"** *"meyyoli uyiroli sivanuthal eyalbe".* The unification of material sound and the subtle sound is Natures' nature. In this particular statement, the unification of matter and energy is unambiguously confirmed.

❋ **"सर्वात्मीयं लिङ्गं आकाशमेव"** *"Sarvaatmeeyam lingam akasameva"* is another statement from Mayamata Vastu Shastra which means that what permeats (exists) in our heart and what is called linga - **விங்கரு** Vinkaru or the luminous shaft of consciousness is none other than SPACE, the akasa.

❋ The vast free space which is luminous is the source of all anda and pinda meaning the universe and the material objects that it is replete with. The scientific statement is **"அண்டமூலமாய் பிண்ட மூலமாய் கொண்டிலங்கு ஒளி வெளி யென"** *"anda moolamai pinda moolamai kondilangu oli veli yena".* Here Oli veli is luminous space and the source of micro and macro beings.

Certain Upanishads do hold scientific materials which I have explored wih reference to Vaastu concepts mentioned in this chapter.

❋ One Taitreeya Upanishad makes direct reference to the evolution of Energy (Space) into matter, material energy or material body. The sloka is as follows.

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आकाशात् वायुः वायोरग्निः अग्नेरापः अद्भिः पृथ्वी

Aakaashaat vaayuhu vaayoragnihi agneraapaha adbihi pruthvi.

The meaning is that **out of space** came forth **air**; from air, **fire**; from fire, **water** and from water **the earth.** From this it is clear that earth has came out of the primal space, the **akasa**. In other words the **space** has metamorphosed into **matter**, the earth.

- Amritha Bindopanishad:

द्वे ब्रह्मणी वेदितव्ये शब्दब्रह्म परं च यत्।
शब्द ब्रह्मणि निष्णातः परं ब्रह्माधिगच्छति ॥

Dve brahmani veditavye sabda brahma param chayat
sabda brahmani nishnaataha param brahmaadhigachati.

There are two Brahmans - two absolutes one is Sabda Brahman and the other is Para Brahman. By Para Brahman, the upanishad refers to Artha Brahman. Sabda Brahman is VAAK and Para Brahman is ARTHA - Hence वागर्थ / पदार्थ / சொற்பொருள்.

- The vast space is filled with countless particles of energy - They are minute cubes, the plan of which is square - This is called Padam in Sanskrit and Tamil. This is the primal manifest form of the unmanifest. The energy contained in the square is called Purusha/Vaastu Purusha. वास्तुपुरुषः चतुरश्र संस्थः This fact goes beyond the limits of material science.

- The minute particle of energy possesses three basic qualities - Satvika, Rajasa and Tamasa represented by basic wave patterns of square, octogon/polygon and circle.

- The square wave pattern (mandala), because of self consciousness develops into an energy grid of 8×8=64 minor spaces on which, anything seen or experienced would create a sharp figure - called inner vision. This is subtle form or picture. The grid of spaces are called basic unit of Time and Space.

- That this square wave pattern occurs in the inner space is met with in Maharishi Marichi's Vaikhanasa Agama. The verse runs as follows

प्राणायामेन विकशित हृद् कमलान्तराकाशे वैश्वानरशिखामध्ये चतुरश्रं हेमाभं विन्दुनासह

During Praanayama-(inhaling and exhaling of life breath) the heart expands or blossoms into a lotus. From the centre of the lotus cosmic fire rises up at the crest of which a particle of energy (bindu) shoots forth into a square of golden

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colour. This square is Purusha or Atman. The universal space is filled with similar energy particles square in form. This is very subtle science, not known to material science.

❋ The Vaastu science of Brahma rishi Mayan identifies qualities in each of the smaller squares constituting energy grid or vaastu purusha mandala. In fact the vaastu science centres round the primal substance (God). Such an analysis is met with only in Vaastu and Agama Shastras, that had originated during Sangam days (10thousand B.C.).

❋ In an Upanishad unearthed in North India, called Vaastu Sutropanishad has revealed certain scientific facts with respect to Time and Space.

वृत्तज्ञानं च रेखाज्ञानं यः जानाति सः स्थापकः ॥

He who understands the cyclic Time (वृत्तज्ञानं) and the Grid (रेखाज्ञानं) patterns is the Sthapati, the desinger and builder.

❋ Space is the source of all the visual and aural phenomena. This space surrounds the universe and a particle of it resides in all live objects from insect to intelligent human being. This minute particle of space is antaraatma or inner being. This is the element in man that experiences, vibrates and turns into objects of its experience. The outer space also experiences, vibrates and turns into objects of the universe. Mayan says,

உள்ளமே முலமாகி உணர்வுறும் கோலமாகி
உள்ளமே ஊக்கமாகி உள்ளமே உணர்வுமாகி
உள்ளமே வழியுங்காட்டி உள்ளமே ஒளியளித்து
உள்ளமே வெற்றி நல்கும் உளவியல் முறையைக் காண்மின்

❋ Sthapati's personal experience is that all his feelings or thought forms appear before him in visual forms. So he says it is the sculptor who becomes the sculpture. It is the poet who becomes the poem. சிற்பியே சிற்பமாகிறான், கவிஞனே கவிதையாகிறான்.

❋ The Saptaswara - the seven musical notes - Sa, ri, ga, ma, pa, da, ni are all sounds in different pitches. They are generated by or identified as such by tuning forks. The tuning forks have different numerical measures for different swaras (pitches). For instance the Sadjama (Sa) gets produced when the fork vibrates 240 times in a second. The next one 'ri' vibrates more than the previous one. Gradually as vibrations increase, the pitches also proportionately increase. Ultimately when the pitch reaches upper Sadjama, the vibrational count will be 480. Lower sadjama and upper sadjama,

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when aroused in a Veena, they would resonate with each other. Similarly the lower 'ri' would resonate with upper 'ri' lower 'ga' with upper 'ga' and so on and so forth.

In the same way, if two Veenas are pitched at Sa, another two at Pa, yet another two at Ni and when one of first is aroused the next one will resonate while the other ones remaining silent. Similarly if the second one is aroused the closer one at Pa will resonate with each other while the other four Veenas will remain silent not responding.

If this is closely examined, it would be found that the numerical measure of vibrations pertaining to each of the same set would respond to each other. The scientific significance is that it is not pitch but the numerical measure of sound space or in short, the numbers that resonate with each other. The corollary is that 4 will resonate with another 4 and with 8, 16, 32, 64 etc. as they are all multiples of the basic number 4.

Similarly further 7 with 14, 7 with 28, 7 with 56 etc. are all numbers that would resonate with each other. This is called Harmony in sound. This theory has led to the theory of material spaces or spatial forms. Vibration is Time and Space are generated by Time. In Indian Architecture, Time unit is converted into space-unit, and the spaces so generated are governed by musical scale. In nature, all forms are found to have been generated by musical units of Time. Hence Architecture is frozen Music. The human forms are also discovered to be of musical scale.

The Kaala mana (time-unit) of the scientific tradition is called Taala mana at technological field and the variety of forms depend upon the variety of Kaala mana or Taala mana. The traditional saying is that Taala bheda is responsible for Roopa bheda.

Prof.Bertrand Russel, the great mathematician endorses this view through his statement 'what we perceive as qualities of matter are actually differences in perodicity'.

❋ Indian religion is based on the unique science of Energy and Matter. Space is energy containing matter. Earth, the material space contains energy fused in it. Both energy and matter lie fused into one substance, invisible, subtle and luminous. This unified substance gets separated into matter because of the space becoming conscious and going into vibration.

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That space is energy which is denoted by the term आकाश तत्व and the Earth is embodied matter, termed as पृथ्वी तत्व

In other words, the primal energy is personified as God Shiva and the embodied energy as God Vishnu. In short the energy contained in all material forms is Vishnu. So Vishnu is said to be in Shiva and Shiva in Vishnu.

शिवाय विष्णुरुपाय; विष्णुरुपाय शिव

$E = mc^2$; $mc^2 = E$

So God Shiva and God Vishnu are scientific substances one residing within the other.

- Human form is a unified form of energy and matter.
  Shiva residing in material form (manifest), in the form of space/energy is Vishnu. Since this energy pervades in all material form Vishnu is said to be all pervasive.

- Energy with Matter is Shiva.
  Matter with Energy is Vishnu.

- आकाशात् वायुः वायोरग्निः अग्ने रापः अद्भिः पृथ्वी

- Space is Shiva - the primal being. He manifests himself into 5 elements namely Earth / Water / Fire / Air / Space - since space is the primal source of the gross elements.

- Subtle matter is Energy.

- Purusha (Energy) contained in matter is called Vaastu Purusha / Vishnu. Embodied energy - is Vishnu.

- Consciousness otherwise called Time, Light and Sound are all matter - Subtle matter. This subtle matter is VASTU / Gross matter is VAASTU.

One going through the above listed tenets of Vaastu Shastra and who have absorbed the essence of the science will not dare say that it is religious/sectarian. Such is the universality of the Supreme science, that each and every creation of man and nature

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would not have been possible it if were not based on the unique science of Time & Space, enshrined in Vaastu Shastra.

To elaborate on these points, still more references are needed and I feel that this is sufficient for the present, since I have to switch over to the next chapter, to bring out more and more of this precious tradition.

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10

TWO FOLD OMS & FIVE FOLD VEDAS

OM SOUND and OM LIGHT

[Primary sources of Sabda Prapancha (Sound Universe) & Artha Prapancha (Material Universe)]

OM is a syllabic sound - It is the source of all articulated words - All such words go back and merge with the sound - Om sound never dies, hence akshara (eternal) - It is ever existing, hence Brahman - ओमिति ब्रह्मं - Omiti Brahmam - ओमिति अक्षरं - Omiti Aksharam - Mayan, the great scientist of Bharat has identified another OM called OM light - Atoms are two fold - light atoms and sound atoms - They are subtle at primal level and change themselves into gross later, finally into material forms - Light is the source of sound - Light ஒளி vibrates into ஒலி sound - Light is the raw material for all visual forms - Sound is the raw material for all aural forms - Hence two fold Oms - That which comes out of OM light is Oviam ஓவியம் picture - That which comes out of OM sound is Omiam ஓமியம்[1], sound picture - They are visuals and aurals - ◌ is known as சுழி Suzhi in Tamil which means 'whirling', 'curving', 'evolving', 'emerging', 'manifesting'. It starts from a point (Pulli புள்ளி or vindu விந்து, paramāṇu பரமாணு) and evolves into line and form - Paramāṇu is a dormant luminous atom. This came to be called zero later in mathematics. This does not mean 'nothingness'. This is the form of OM at subtle state. This concept is represented by the letter உ in Tamil. Whenever one starts writing a letter or a book this symbolic letter tops the page. This is called பிள்ளையார் சுழி Pillaiyar Suzhi, meaning primal curve represented in the twist of the trunk of the elephant headed God, Ganapati. In fact the trunk is twisted like OM, in the iconographical form. At unmanifest level, the form is identified to be a perfect □

1

காப்பியல்	அகத்தியல்	ஓவியல்	ஓமியல்	உணர்வு நிலை, இயல் நிலை
காப்பியம்	அகத்தியம்	ஓவியம்	ஓமியம்	எழுநிலை / வரி நிலை
காப்பியர்	அகத்தியர்	ஓவியர்	ஓமியர்	ஆக்கியோன்

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and at manifest material state it is O. Because of the self spin undertaken, by □, the resulting form assumes O. Tridimensionally, the primal form of Bindu is a cube whereas at final level it is spherical. Light and Sound atoms are cubical at primary level and spherical at material level. According to Mayonic science, the vast universal space is filled with cubical atoms. They are called, in modern science, 'building blocks of the universe'. This was so discovered and announced recently in 1997 by western scientists.

The fact of space atoms existing was discovered some 10,000 years ago by Mayan, which fact is technologically interpreted and incorporated in Vaastu Shastras that are handled by Shilpis of today - This fact occurs in the chapter on units of measurement - The word used for the cubical atom or building block is designated as சிற்றவை Sitravai or சிற்றம்பலம் Chitrambalam in the Tamil tradition which literally means mini-hall. (This is designated as Chilambalam சிலம்பலம் by Mexican Maayan.) This is in fact the microabode where Shiva is said to dance, similarly He dances in Macrobode, the universe or Cosmos. The concept of God Shiva dancing in the cosmic Space and in atomic space is evident from the existence of a temple at Chidambaram (South India) a saivite temple of remote origin. This is the actual meaning of अणोरणीयान् महतो महीयान् He exists in Pinda and Anda - The dance is the dynamic quality of space, the rhythmic pulsation - (for further details, vide 'Sthapati's visit to Maayan Land' and 'Temples of Space Science', the former a monograph and the latter a booklet) - The art and architecture have their roots in the concepts stated above and followed hereafter too - They are language based - Aurals turn into visuals and vice versa - Sound into Light and Light into Sound - They coexist eternally and inseparably at subtle and gross levels.

Mayonic science of OM as expressed in Aintiram, the anthology of Maya Sūtras, are quoted hereunder and explained in simple English - A few examples:

✸ **ஓம் ஒலி கேட்டுணர்ந்தால் உள்ளொளி ஞானம் தோன்றும்**
ஓம் ஒளி கண்டுணர்ந்தால் ஒளியொளிர் உருவே தோன்றும்
ஒளியொளிர் உருவம்தானே ஆடலன் ஆடலன்றோ — மயன்.

Om Oli kettunardal ullolli jnanam thondrum
Om Olli kandunardal olliyolir uruve thondrum
Olliyolir urvamthane aadalan aadalandro — Mayan.

A sharp light emerges in the inner space, the moment when one hears and experiences OM sound. It is a sharp

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experience of what is heard by ears. It is the meaning (or meaningful form) that is experienced. This experience takes place at a point called OM. This is jnāna or enlightenment. This is inner vision.

A luminous form appears when one sees and experiences OM light. This luminous form is caused by the vibrations of inner light. Such a form generated by the rhythm of light is indeed the Dance of the Dancer, Shiva Natarajan. In short this means that whether a picture is orally or visually articulated, it is indeed the luminous picture that is developed and experienced at the inner space. It is a sensitive form occurring at the micro space called tejo bindu or ஒளியணு olianu, meaning particle of light or energy.

✸ **ஒளிமுதற் கண்ட விண்ணொலி ஒசை வெளிமொழி ஒமென விளம்பற்பாற்றே.**

Olli muthar kanda vinnoli osai velimozhi omena vilambarpaatrey.

Light is the primal element of vibrant space. It vibrates and manifests itself into noise and settles down finally as audible sound OM spreading all over the cosmic space. Hence, OM is said to be the language of space.

✸ **நிறையொலி, நேரொலி, வெளியொலி, விண்மொழி மறையொலி ஒமென வழுத்தற்பாற்றே.**

Niraiyoli, Neroli, Veliyoli, Vinmozhi
Maraiyoli omena vazhuththarpattrey.

The sound that fills the space, moves and spreads all over the space. It is indeed the dynamic source of spoken language. OM is the primal sound of sacred scriptures. OM is the essence or scientific substance of the universe.

✸ **மறைமுதல் ஒலி 'ஒம்' அறைதல் மரபே.**

Maraimudal oli Om araidal marabe.

This OM is said to be the primal syllable prefixed to the sacred scriptural sayings. This may be 'திருச்சிற்றம்பலம்' meaning 'microbode'.

✸ **மொழிமுதல் ஒமென உரைத்தல் வழக்கே.**

Mozhimudal omena uraithal vazhakke.

Traditionally, this OM sound is held to be the primal source of languages.

✸ **அணுத்திரள் ஒலியே எழுத்தொலிச் சிறப்பாம்.**

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Anuththiral oliye ezhuththoli chirappaam.

The structure of letters of a language lies in the configuration of sound particles (atoms). It is based on a mathematical order.

✸ **ஒளியொலிப் பொருளாய் ஒங்கும் எழுத்தே.**

Olliyolipporulai ongum ezhuththe.

Letters emerge as the composite substance of sound and light.

✸ **உயிரும் உடலும் எழுத்தீரியலே.**

Uriyrum udalum ezhuththeeriyale.

The letter is the unified substance of energy and matter, just like body and life (energy); energy and matter are the twin aspects of a letter.

✸ **உடம்புடன் உயிர் வந்து ஒன்றுவது இயல்பே - தொல்காப்பியம்**

Udambudan Uyirvandu ondruvadu eyalbey - Tolkappiam, the Tamil grammar.

It is phenomenal for energy to move and merge with matter. Physical body is matter and subtle life is energy. Energy remaining merged with matter is phenomenal. A consonent takes a finite form of a letter, only when associated with a vowel 'க் + அ = க' (ik + a = ka). Consonant + Vowel = unified form called letter. In Tamil language every vowel (elemental sound) gets fused with consonant (matter) unlike English where vowels come in between letters.

✸ **மெய்யொலி உயிரொலி சிவணுதல் இயல்பே.**

Meyyoli uyiroli sivanudal eyalbey.

It is phenomenal for gross and subtle sounds merging with each other.

Please note, how the scientific phenomenon of energy and matter lying fused in space is recognised and how it is extended to form Tamil letters in the remote past. This is discovered to be natural. This cannot be questioned. Is it not amazing? The emergence of syllabic sounds and written letters right from inner space has scientific significance - They are self manifest forms. Therefore Tamil is called இயல்மொழி 'Iyalmozhi' language of Nature. It amounts to saying that Nature speaks Tamil or Tamil is spiritual, not intellectual.

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OM, the primal sound is a scientific phenomenon, occurring in every individual being (Inner space) and in the universal being (Outer space) identified as such by Mayan, the great architect, poet and scientist of legendary fame. The statements of Mayan as detailed above unravel the mystery shrouding the phenomenon of creation - generation and growth of forms at subtle and gross levels. This happens at **Inner space** and **Outer space** called அகவிண், புறவிண் (Ahavin, Puravin) அகவெளி, புறவெளி (Ahaveli, Puraveli) சிற்றுள்ளம், பேருள்ளம்[1] (Sitrullam, Perullam) जीवात्मन्, परमात्मन् (Jeevatman and Paramatman) collectively called आकाश (Akasa) or ஒளி oli as discovered, described[2] and established by Mayan. The verse, quoted first, reveals this phenomenon very clearly and scientifically.

We, human beings, have an exceptional quality and ability to experience and communicate the experiences to people around us by effective means. There are two channels of expression of experiences - one by sound (uttered words or aural forms) and another by light (visual forms). The seed, with respect to sound, is **OM sound** and with respect to light is **OM light**. The seeds of sound and light are indeed matter, but subtle, capable of pulsating into patterns of energy waves. The mathematical formula causing this phenomenon is implied in the statements (sutras), quoted above. But this is elaborated in the Vaastu Shastras like Mayamata, Manasara etc, technologically for deriving benefits - material welfare and spiritual well being. They are interpreted in terms of significant numerical measures which the Sthapatis apply in their professional activities. They are spiritual and sacred. This accounts for the sanctity of structural and imagic forms created by them. This fact is attested by Agamas also in the following sutra.

मानेन निर्मिते विम्बे स्वयं आभाति दैवतम्

manena nirmite bimbe swayam abhati deivatam

It means that the **bimbas** created in accordance with the Vaastu measures attain sanctity by themselves. Hence such forms are held in the tradition as worship worthy. This is spiritual not religious or sectarian as mistaken by a section of our society. Hence Vaastu principles are

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1 உள்ளம் Ullam means வெளி Veli, space.

2 अचिन्त्य अव्यक्त रूपाय निर्गुणाय गुणात्मने । समस्तजगदाधार मूर्तये ब्रह्मणे नमः — Mayasura's Surya Siddhanta. Benedictory verse.

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universal and are followed even by Jains and Buddhists, who are set outside the Hindu orbit. Now the West is at it and on it, with open mind. The words Vastu and Vaastu are known today all over the world.

Hence, Veda Vyasa, in his Mahabharata, extols Mayan, the spiritual scientist as **Viswakarma,** the creator of the Universe. His discovery is that God does not create anything but manifests himself as objects of the universe and the universe itself by means of a formula identified by him as a **scale** with which all tridimensional forms come into being in the material world. This is called 'order' or **वास्तु धर्म Vaastu dharma.** This is justified in the above quoted verses and sutras, which reveal the science underlying all manifest forms or secret of creation.

Further, that the **SPACE** is a unified field of **"Sound and Light"** and **"Energy and Matter"** is also exposed by Mayan in this context. Akshara எழுத்து eluthu - letter - is a unified substance of energy and matter - light and sound

The substance of the verses quoted above from Aintiram is this. There are two types of OM. One is Om Sound and another is Om Light. Om sound causes the experience of subtle form, which is actually "the luminous inner vision", which helps one to figure out what is actually heard. Om light causes the experience of "Subtle form in material terms". The form so experienced at the level of inner space (Atman/ உள்ளம் /Ullam) is generated by the vibration of light or luminous space existing in all beings. This vibration, set to a rhythm, by the effort of the dynamic space is called **"DANCE"** meaning rhythmic movements causing rhythmic patterns of waves leading to generation of rhythm bound material forms. This orderly vibration, known as **"rhythm of the Light"** is the **dance of the Dancer,** expressed in **Vaastu** and **Agama** as **"SHIVA TANDAVA",** the materialised dance form of Shiva, the SPACE. That the Space is Shiva is confirmed and asserted by Mayan in the following words - **सर्वात्मीयं लिङ्गं आकाशमेव** - 'sarvatmiyam lingam akasameva', in his Mayamata Vastu Shastra. The meaning is that Atman, and Lingam are Spaces - ஒளிவெளி - oliveli - luminous space[1].

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[1] அண்ட மூலமாய் பிண்ட மூலமாய்க் கொண்டிலங்கு ஒளிவெளியென anda moolamai pindamoolamai

... Continued ...

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The dancing form of Shiva mentioned above is the primal manifest form of the un-manifest. This is the primitive and fundamental form of God. So says Mayan unambigously - in clear terms. The significance, in this context, is that the subtle body of God (निष्कल स्वरूप) takes materialised form (सकल भाव) in the hands of the Sthapati who is initiated into the technology of creation. Measures to create this form are given in Vaastu Shastras, conveying thereby the fact that God possesses human form at subtle and gross levels. This concept gave rise to image worship, evolving worship-methodology as found in the later day liturgical texts elaborately. The dance form of the subtle energy is called **SHIVA**. So was it realised and given material form by Mayan, the great scientist and technologist.

Further, in this process (of the subtle turning into gross), the subtle energy gets reflected into gross (material) energy, which is called **VISHNU.** The energy contained in all material objects of the Universe is denoted by the word Vishnu. He is therefore said to be 'all pervasive'. In other words the mirror reflection (bimba) of Shiva is Vishnu. This may be restated that Vishnu is the extended form of Shiva. In scientific parlance, it is the subtle space (Energy / Shiva) that changes itself into gross space (matter / Vishnu). In Tamil, it is விண் (Vin) that turns into மண் (Mann). Again, it is விண்பொருள், விண்கரு Vinporul, Vinkaru (substance of the vibrant space) that turns into மண்பொருள், மண்கரு Mann Porul, Mann karu (substance of the earthly space). The subtle substance (energy) that exists in both the forms is also known as **purusha. Therefore, Shiva is Vastu Purusha** and **Vishnu is Vaastu Purusha**[1]. This is the pre-vedic concept of macro cosmic and micro cosmic spaces still persisting and being worshipped in the South, in the imagic forms of **Dynamic Shiva** and **Dormant Vishnu. Dormant Shiva is Vishnu and Dancing Vishnu is Shiva.** The symbols of light and sound held by these two forms very well

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kondilangu oliveliyena, meaning that all objects of Nature have their source in LIGHT. He is very specific when he says விண்ணின் மூலமாய் மண்ணின் மூலமாய் பண்ணின் மூலமாய் நோக்கமாய் - ***vinnin moolamai mannin moolamai pannin moolamai nokkamai*** as the source of the free space, earthly space and of sound space, with a motive behind, with a purpose at heart.

1 Vastu = energy , Vaastu = matter. Vastu Purusha = subtle energy; Vaastu Purusha = Material energy. Vaastu is the extended form of Vastu.

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strengthen and convince this concept, beyond doubts. The **"drum and fire"** and the **"disc and conch"** are the symbols held in the arms to illustrate the scientific phenomenon of Sound and Light. One may note the inter change in the placement of light and sound symbols signifying the primal and final form - evolution and involution. These two forms are the most ancient ones in the Dravidian culture.

That Shiva is primal and Vishnu is final form goes further to strengthen **Prof.Einstein's formula** of $E=mc^2$ and $mc^2=E$, meaning the "Subtle energy = Gross energy" and vice versa. In the former, **Matter** lies fused in **Energy** and in the latter **Energy** lies fused in **Matter**. Energy and Matter lie fused at both the levels of existence. The concept of Shiva Vishnu temple represents the concept of unified existence or coexistence of Energy and Matter. This is justified in the Mayonic statement of सर्वात्मीयं लिङ्गं आकाशमेव - ***sarvatmiyam lingam akasameva.*** In keeping with these concepts the Dynamic Shiva is cast in metal to mean that He is space - born. while the Dormant Vishnu is shaped out of earth or carved out of stone to mean that the latter is earth born. In the Upanishadaic statement of - "आकाशात् वायुः वायोराग्निः अग्नेरापः अद्भिः पृथ्वी" "***aakaasaat vaayuhu vaayoragnihi agneraapaha adbhi prithvi***", the process of Energy (Celestical Space) metamorphosing into Matter (Earthly Space) is further supported and elaborated. The Akasa, the Subtle Space turns into Earth, the material space. **This is the science of Space resulting into Earth, the former being signified in the subtle form of Shiva and the latter in the gross form of Vishnu. Are these concepts scientific or speculative philosophy! Mayan, the Silpi, has given form to these concepts making use of the rhythmic measures caused by the Space - vibration. Akasa and Prithivi are two elemental vibrating energies.**

Let us now go deep into the dynamics of Om sound and Om light.

'O' is the noun when it is dormant like seed and OM is verb when it is activised by effort, just like the sound lying dormant and the same turns dynamic when the string is activated. Om in Tamil tradition is meant by சுழி suzhi which literally means the wave evolving out of a **point** called புள்ளி pulli, where

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experience and expression take place. It is the active Om that grows into material form ultimately. The primal movement that emerges from the **point** makes a curve in the clock-wise direction, hence வலம் சுழி Valam suzhi[1]. In Tamil, Om ஓம் Ongu ஓங்கு, Onguru ஓங்குறு is infinite verb, meaning to grow, extend, soar high. 'O' or 'OM' is the spring board of all forms, aural and visual. In material sense, Om sound is the source of all uttered words (aural forms); Om Light is the source of all visual forms. **ALL WORDS ARE FORMS AND ALL FORMS ARE WORDS.** So, Om is a composite of Sound and Light. Words and forms are also composite of Sound and Light. This is signified by Shilpi Mayan, in the concept of **Ardhanariswara** - an imagic form with features of half male and half female, called **Ammai Appar,** universal Father and Mother. The same concept is implied in the Dancing form of Shiva, a unified entity of Ammai and Appar.

All uttered words enter by the ears and turn into luminous forms at inner space. It is in this state that experience takes place or one feels enlightened. Similarly, all visible forms entering by the eyes, cause luminous forms at the inner Space, at which state experience takes place and experiences are figured out. All such experiences take place at one and the same **'point'**, 'O' beyond which nothing exists. This point is actually the **OM,** a particle of Light or particle of Energy or Paramanu as they are mentioned in the Vaastu Shastras.

The most important point that should be remembered in this context is, that in no scripture such a phenomenon of the existence and emergence of two Oms and their being sources of aural and visual forms is brought to light and the phenomenon discussed logically. Mayan, the architect and scientist has shown the path to walk on, and understand the mystery of creation - the genesis of all animate beings.

But at the same time, in a beautiful verse from Amruta bindopanishad, a phenomenon closer to Mayan's discovery is implied, though the context appears to be slightly different.

द्वे ब्रह्मणी वेदितव्ये शब्दब्रह्म परंचयत्।
शब्दब्रह्मणि निष्णातः परं ब्रह्माधिगच्छति ॥

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1 The வலம் சுழி விநாயகர் Valam Suzhi Vinayakar represents the active Brahman and it is significant of the primal state of motion - from potential to kinetic state.

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"Dwe brahmanee vedi tavye Sabda brahma param cha yat
Sabda brahmani nishnaataha Param brahmaadhigatchati."

The substance of the verse is that there are two Brahmans, one is **Sabda Brahman** and the other is **Para Brahman**. He, who understands Sabda Brahman will alone be able to understand Para Brahman.

Here, Sabda Brahman denotes sound, sound space or sound universe **nada prapancha,** ஒலி ஞாலம் olijnalam, - specifically word forms or aural forms of the universe whereas Para Brahman means light, luminous space - **artha prapancha** - the light universe, ஒளி ஞாலம் olijnalam - specifically visual forms of the universe. The science of sound and the evolution of sound space into sound form, as revealed and discussed by Mayan eminently fits into the context and concept of Sabda Brahman. Further, since the sound is found to originate from the vibration of light, ("बिन्दुमध्य गतं नादं" ***"bindu madhya gatam naadam"*** **sound OM lying in the centre of light OM),** it may be concluded that Para Brahman is inner light or inner consciousness. This is applicable to outer light or outer consciousness. In this context, the Tamil tradition uses the word ஒளி (Oli), உள்ளொளி (Ulloli), Inner light or inner awareness and வெளியொளி (Veliyoli) to mean the consciousness of the outer space or cosmic space.

From the above discussion it must be evident that **CONSCIOUSNESS** is the source (whether individual or universal) of all articulated word forms as well as tangible material forms of the universe. Conclusively this **CONSCIOUSNESS** is **Light or** வெளியொளி (Veliyoli) or as Ramalinga Adigalar says **"தனிப்பெருஞ்ஜோதி tani perum jyoti"** "independent and universal Light" capable of going into vibration (rhythm) and causing visual and aural forms as observed by Mayan in the statement quoted at the outset. Sound is the reverberation of light, at subtle or gross levels. Sound is the extended or reflected form of the **Light. Word** is the reflected form of the luminous spiritual form experienced at inner or outer level.

That 'word' and its 'meaning', i.e., 'word' and 'form', **नाम** and **रूप** are inseparable is signified in the beautiful verse of poet Kalidasa, where he says that 'word' vak is mother and 'form' 'artha' is father. To him, they are Parvati and Parameswara, in the aspect of

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Ardhanarishwara. The epithet **'Vaagartha'** and **'Padaartha'** are impregnated with this scientific significance. The verse is, as quoted here under.

वागर्थाविव संपृक्तौ वागर्थ प्रतिपत्तये ।
जगतः पितरौ वन्दे पार्वती परमेश्वरौ ।।

vagarthaviva samprikthou vagartha prati pattaye
Jagataph pitarou vande Parvati Parameshwarou.

In this sloka there is another concept interestingly implicated. It is not that 'parvati parameswarou' are alone inseparable but **पार्वतीप रमेश्वरौ** are also unified. By this split or pun Kalidasa depicts Vishnu as brother of Parvati (**पार्वतीपः**) and Lakshmi as Lord of Ramaa (**रमेश्वरः**). Here Kalidasa has equated the combined form of Shiva and Parvati with that of Vishnu and Lakshmi. The play on epithets **पार्वती परमेश्वरौ** and **पार्वतीप रमेश्वरौ** is also a point, highlighting Kalidasa's poetical genius (**उपमाकालिदासस्य**) and his balanced view on Saivism and Vaishnavism, though he happens to be a Saivite as revealed by his name Kalidasa.

That Kalidasa respects both Saivism and Vishnavism is openly indicated in this verse which is actually the benedictory verse of Raghu Vamsa Maha Kavya. The akasa tatva (science of subtle space) and Prithvi tatva (science of material space) i.e. the science of Energy and Matter is beautifully picturised by Kalidasa. Really Kalidasa is a gem among poets (**कविरत्न**) as tradition has recognized and respected him.

Attracted by this phenomenon, and the imagic concept, the Padama Samhita of Pancharatra Vaishnavism has a sloka-

लक्ष्मी नारायणं कुर्याद्भुजाष्टक समन्वितम्
यद्वा चतुर्भजं शङ्खचक्राध्यायुध भूषितम्
वामभागेतु हस्ताभ्यां वरदं पङ्कजं तुवा
इतराभ्यां च हस्ताभ्यां अभयं चक्रमेव वा
वपुषो दक्षिणे भागे विष्णुर्वामे सरोरुह
पीनस्तन तटो वामः श्रीवत्साङ्कस्तथेतरः
वामेहेमनिभः श्यामो दक्षिणो भाग इष्यते
आसीनं वा शयानं वा गरुडारूढमेव वा
स्थितं वा कल्पयेद्देवं .....

Padma Samhita, Kriya pada
18th chapter 50-54a.

where Lakshmi Narayana in the combined form of half male and half female is mentioned, but no where depicted in sculptural form in the Vaishnavite tradition. In this form, the significant factor is that the **Lakshmi as Vaak** is on the left side of the composite form, while **Narayana** as **ARTHA** is on the right side as in Ardhanareeswara either with four hands or eight hands. The same concept is repeated in the Sri Vaishnava cult where Lakshmi is kept, but on the right chest of Vishnu as a mole - Srivatsa. Here, there

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is also the implication of Prakriti - purusha tatva, **Lakshmi as Prakriti and Vishnu as Purusha.**

Hence, the basic concept of the co-existence of 'energy and matter', 'light and sound', 'OM light and OM sound' and as also existing as individual entities as known from Mayan, Upanishads and Agamas is indeed the science of Om Sound and Om Light as revealed by Mayan, in Aintira Vyakarana. This is echoed in the words of Robert-Lawlor, an Australian Architect and scientist and the author of a famous book titled as 'Sacred Geometry'. He says that he has taken the traditional way of research into this science of sound so as to understand the traditional pattern of buildings. He says -

"The fundamental nature of the material world is knowable only through its underlying patterns of wave forms".

"Both our organs of perception and the phenomenal world, we perceive of form and proportion. Therefore, when many ancient cultures chose to examine reality through the metaphors of geometry and music (music being the study of the proportional laws of sound frequency) they were already very close to the position of our most contemporary science".

"The point of view of modern 'force-field' theory and wave mechanics corresponds to the ancient geometric - harmonic visions of universal orders as being an interwoven configuration of patterns".

Robert Lawlor quotes Bertrand Russel in this connection as, "What we perceive as qualities of matter, are actually differences in periodicity".

I take this and respect this as the modern definition of Time and Space that lay uninterpreted for a long time in the western tradition.

It may not be out of context, if I bring in one more point, for scholarly appreciation. This is with respect to the element that activises or causes the emergence of Light and Sound. This element is ingrained in Light itself. The element is synonymous with consciousness, otherwise called KALA or TIME. According to Mayan, the supreme scientist of Sangam days, the Time is discovered to be the primary element of

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the Absolute Brahman or Moolam (மூலம்). O is activated into OM.

Time is defined by Mayan, as **'Consciousness'** itself, emerging into Vibrations leading to wave patterns of energy that solidify into three dimensional visual and aural forms. Hence Time is said to be the casual element of all objects of the universe and universal space itself. The supporting verses can be found in Mayonic as well as puranic literature. They are as follows:

"காலமே ஆக்கும் காலமே காக்கும்
காலமே துடைக்கும்"
"காலமே எவைக்கும் மூலம்
காலமே மூல ஆற்றல்
காலமே கோலத் தோற்றம்,
காலமே ஞாலத் தோற்றம்
காலமே விந்தை செய்யும்
காலமே நுணுக்க மாயும்
காலமே அணுக்கள் ஆயும்
காலத்தின் ஆற்றல் என்னே".

**"Kaalame aakum kaalame kaakkum
kaalame tudaikkum"
"Kaalame evaikkum moolam
kaalame moola aatral
Kaalame kolath thotram,
kaalame Jnalath thotram,
Kaalame vindai cheyyum
kaalame nunukka maayum
Kaalame anukkal aayum
kaalathin aatral ennae"**

The meaning of Maya Sutra is as follows:-

Time that creates, sustains and dissolves everything so created.

Time is the source of all forms; Time is the primary source of all forms. Time is the phenomenal world. Time is indeed the universe itself. Thus Time works wonders; it is subtle. Time is fractal, starting from atomic time and atomic space. What a wonder that time inheres?

**"कालः सृजति भूतानि कालः सम्हरति प्रजाः
सर्वे कालस्य वशगाः कालोतस्य वशे स्थितः"**
— Skanda Puranam

Kalaha srijati bhootani Kalaha samharati prajaha
sarva kalasya vasagaha kalo tasya vase sthitaha

The meaning is that it is Time that creates Pancha bhutas as well as material forms that we see in the world. It is Time that takes away all that had been created. Everything rests in the hands of Time. But that Time rests with Him (Muruga).

Mayan calls Time as காலமாக் கடவுள் Kaalamaakkadavul, Time-God. That which remains beyond Kaala is Moola, the Absolute.

To be brief, the Moolam transforms itself into Kaalam, Kaalam into Seelam (rhythm) and Seelam into Kolam (form). All put together is Jnalam (universe).

Moolam - Kaalam - Seelam - Kolam - Jnalam, this is the panchakritya (five fold functions) as enunciated by Mayan, the scientist.

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11

TIME & SPACE
RHYTHM & FORM

The science and technology of Vaastu Shastra are hinged on the concept of Space, Time, Rhythm and Form - This concept has given birth to a group of **'five fold Vedas'** namely Sabda, Gandharva, Naatya, Sthapatya and Pranava - There is also a traditional group of **'five fold Tamil'** namely - Poetry, Music, Dance, Sculpture and Architecture - (இயல், இசை, நடம், சிற்பம்,கட்டிடம் - ஐந்தமிழ்) These are already explained in detail under **'Genesis of art and architecture'** - Yet it is repeated again just to focus on the dynamics of the micro and macro spaces, the primary source of aural and visual forms of the universe - The conscious space is responsible for the emergence of five elements which evolve into material forms. There are three more elements - light, sound and vibration of space (rhythm) - They are lying hidden in the space - These 5 + 3 are the eight elements signifying eight qualities (gunas) of the 'Absolute Moolam' - Oli ஒளி, the inner light, is Moolam - Oli ஒளி is consciousness or inner feeling (प्रज्ञानं ब्रह्म) - They work wonders in the universe of which one is form generation and form figuration.

There are two spaces - the **inner space** and the **outer space**. They are energetic spaces.That which happens within also happens outside. They are experimental as well as experiential.

The Inner space, the primal creative centre, is the **Akasam**. It experiences, vibrates and transforms itself into the objects of its own experience.

The outer space is **Paramakasam**. It too experiences, vibrates and transforms itself into the objects of the Universe.

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Vibration of space is realised as Kaalam, which means Time. Time is immanent in the primal space which is its manifest form. Time is indeed the force of energy, co-emerging with consciousness. Its presence is recognised only when conscious space attempts to give expression to its experience. So Time, emerging as vibration, is quantifiable numerically. This is analogous to the quantifying of the vibrations emanating from a stringed musical instrument (say Veena) and tuning them into 'sapta swaras' the vowels of music. The human body is likened to a Veena called **'Sareera Veena'**. It also produces sapta swaras[1] (அ, இ, உ, எ, ஒ, ஐ, ஔ) (a, e, u, ae, o, ai, au) (Sa, Ri, Ga, Ma, Pa, Da, Ni). The frequency of vibration (rhythm) is a quantified measure of sound. Hence it is a number. The numbers turn into spatial (material) forms again by the effort of Time. So, Time becomes the creator, the created and also the material for creation. Further, Time is not only the causal element of all material forms, but also it is the cause of their growth, decay and dissolution as well. Time is Absolute, not relative or physical. The all pervasive **Eternal Time** is **Kaala Brahman** or **Kaala moolam. In the technological domain the Kaalam is brought into role by a unit of time-measure called Taalam.** (Foot-beat in Dance).

To the artist, **Taalam** is the rhythmic definition and ordering of Time. It is **Kaalamatra**. The rhythm (taalam) is the inherent quality of micro and macro spaces.

Time and **Space** are equal, since it is Time that changes into space. **Taalam** as time-measure is used in poetry, music, and dance, and **Taalam** as space-measure, is applied in architecture and sculpture[2].

Rhythm-bound musical forms and rhythm bound architectural forms are inviting, alluring and spiritually elevating.

Through the grammar of the **Taalam**, the **Shilpi** creates and his

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1 The 'Garbhopanishad' makes mention of the genesis of Saptaswaras in the bindu (விங்கரு Vinkaru, the foetus of space) that goes into mother's soil. They are the offshoot of vibrations that take place in the womb and later on through the vibration of the inner being (inner space) or daharakasa (subtle space), during the life time of the material body.

2 In the traditional designs of house buildings, public buildings as well as temple buildings, town and village layouts and imagic forms, this fact can be recognised, the richness of this concept is noticeable in temple and imagic forms.

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feelings take forms. Through the grammar of the Taalam, the **Divine Shilpi** creates His own objects of the universe. Indeed their scale is one and the same!

The shilpi expresses his feeling-forms in two ways - aural and visual. **Brahman** though one, manifests himself into two Brahmans - one as **Naada Brahman** (ஒலி மூலம் Oli moolam/Sound) and the other as **Vastu Brahman**. ஒளி மூலம் Oli moolam - Light. They are the sources[1] of **Vaak** and **Artha** (word and meaning) respectively.

Seeing himself in his own creations, the shilpi experiences joy. The Divine Shilpi too, seeing Himself in His own manifestations, experiences joy. It is an advaitic experience, the experiencer becoming the experienced. **Hence, the traditional experience is that the sculptor becomes the sculpture; the poet becomes the poem.** He sees with his own eyes the extended form of his I-ness (Thaaniyal Vadivu). How blessed he is! He realizes Brahman[2]. He becomes 'Brahmavid[3]'. He experiences Parasukham[4].

As the grammar adopted by the Human shilpi and the Divine shilpi are one and the same for their creations, it is absolutely true that the Divine Shilpi delights to reside in the Human Shilpi's creations. It is resonation caused by the numerical measures. It is indeed His own form wrought out in His own measure and material. Hence the Human Shilpi's creations are worship worthy.

He holds the forms created from this experience as Spiritual and Divine. He takes them to the people and evokes in them the same vibration, the same experience and the same joy. He re-moulds his rasika (the spectator) in his own substance and order, it is re-creation in flesh and blood. This is Vaastu dharma, the universal and eternal order.

This response or resonance, he calls

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1 The space is the source of not only 'sound' (आकाश शब्दैक गुणकम्) but of 'light' (ஒளி வெளி luminous form) as well. Hence, Mayan speaks of two OMs - Om Sound and Om Light. He further says that in as much as Om Sound is the source of all words and word forms (aurals), Om Light is the source for all material forms (visuals). Vaak (sound based forms) originates from Om Sound and Artha (light based form) originates from Om Light. How deep our Indian Science is!

2 Brahman, the ultimate source ; moolam; meaning, root.

3 One who knows Brahman ; Vaastu vid, one who knows the substance of the universe.

4 Spiritual comfort; supreme bliss.

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Rasaanubhavam[1] and the communion, **Bhakti**[2], the **Lover** and the **Loved** fusing into the one timeless, eternal substance, the **Vastu**.

House building or Temple building, set to Taalam, assumes musical form; and it becomes a living organism[3] capable of vibrating like a human being in view of the energetic space enclosed therein - so says Mayan, the ancient scientist of the South and the North.

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1 Experience of the essence (rasa).

2 Devotion.

3 வீடு ஓர் உயிர்ப்பொருள்: வீடு ஓர் இசைவடிவம்.

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12

VIBRATION AND RESONANCE

AS APPLIED IN TRADITIONAL ARCHITECTURE

"The fundamental nature of the material world is knowable only through its underlying patterns of wave forms".

"Both our organs of perception and the phenomenal world, we perceive of form and proportion. Therefore, when many ancient cultures chose to examine reality through the metaphors of geometry and music (music being the study of the proportional laws of sound frequency) they were already very close to the position of our most contemporary science".

"The point of view of modern 'force-field' theory and wave mechanics corresponds to the ancient geometric - harmonic visions of universal orders as being an interwoven configuration of patterns".

— Sacred Geometry of Robert Lawlor
Architect and Scientist of Australia.

Robert Lawlor quotes Bertrand Russel in this connection as saying "what we perceive as qualities of matter, are actually differences in periodicity".

The principles and measures noticeable in the Vaastu Shastra are mostly unintelligible to many a technical and non-technical scholar because, as we have seen earlier, the Vaastu Shastra is dealing with a supreme Science of "Energy and Matter", "Time and Space", "Space and Spatial form" as well as

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"Word and Form" all caused by the primal element namely the **Space**.

In the earlier chapters, though this is explained in detail under various contexts, here again it is felt, that a repetition or focus would be of added interest and relevance. Further, it merits elaboration as it would give a better picture of the most important aspect of what is called vibration and the resulting rhythm, expressed in numerical terms and applied in the design of architectural edifices. The construction of a poetry and that of an architectural form are equated in the Sthapatya Veda. This is discernible in the proportional measures used in building forms, temple and imagic forms.

While dealing with the qualities of **Space**, it was mentioned with emphasis that there are three more elements of subtle energy namely Sound, Light and Time, the last being the Vibration of Space. It is really astonishing that this subtle element of vibration was possible to be measured even in the remote past, by Vaastu Vedins. When there were no precision instruments as of today, human voice and stringed instrument have served as tools to measure and correct vibrations.

It is already discussed that the Time, recognised as the vibrational measure of subtle space, is the causal element for all visible and invisible objects of nature. The reader has to remember that the element of Time is very vital for the emergence of either subtle or gross form experienced inwardly and expressed outwardly. What is inwardly experienced is 'seen' at our inner space and what is actually made visible outside in flesh and blood is material form.

For those objects to come into reality, either in the inner space or in the outer space, a kind of pulsation takes place in the space itself. This is self propelled or spontaneous phenomenon which is otherwise called 'consciousness'. In the tradition, 'consciousness' itself is considered as matter though subtle. When the conscious form appears in the inner space, we call it a vision. This is sharp enough to be realised in three dimensional form as well. In other words, the form which illumines inside in three dimensions is extended outside into the same three dimensional material form or visual form. The subtle one realised inside in all clarity and beauty is called **Shilpa** and what is projected into the world of reality, is

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Pratima, meaning, the 'original' and the 'replica' respectively. The latter is indeed the reflection or **bimba** as held in the tradition. One Vaastu Sutropanishad makes a reference to this phenomenon in the saying that -

"शिल्पात् प्रतिमा : जायन्ते " - silpāt pratimaha jāyante - 'Pratimas are born out of Shilpa'.

How do these subtle and gross forms develop and what is the material substance that role into audible or visual forms? All that are (aural and visual forms) called Shilpa and Pratima are composite substances of 'Energy and Matter' and 'Matter and Energy' respectively.

These phenomenal forms, therefore, to get generated at primal level, take straight lines or curvilinear wave patterns, caused by the pulsation of the space and as directed or guided by consciousness. This is recognised to be another fundamental element for form figuration.

These basic wave patterns and ultimate structural forms are found to originate from two materials. One is Sound and another one is Light - the two elemental substances inherent in Space. In this context, one has to understand that all things, whether subtle or gross, are all nothing but **matter** (Porul, பொருள்). In other words, in the beginning there existed only **matter** whether gross or subtle, a composite of which is found to lie fused in the Space- which surrounds and fills the Universe and exists in all animate beings. The particular state of co-existence of energy and matter is denoted by the modern term "unified field of energy and matter" - the minutest particle of which is called in Tamil as விண் அணு Vin-anu, 'sub atomic space'.

As earlier discussed and brought to readers' understanding that the space, the unified substance of energy and matter, is filled with countless particles of energy in cubical form. These cubical particles of energy lying all over the vast space, cause threads or strings of energy called **"Wave"**.[1] These waves may be either a straight line or curved line forming a variety of patterns. But it is discovered and

1. Point, bindu (புள்ளி) etc. used in tradition are nothing but particles of Prime energy. Such points form themselves into lines (கோடு), lines into patterns (வரி; vari linear form), patterns into structure (வடிவு vadivu) and structure into complete form (உருவு uruvu). These are the five fold manifest forms or panchkritya of the unmanifest.

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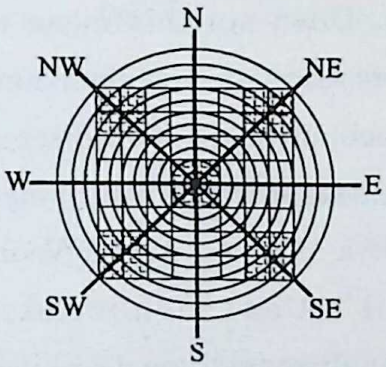
established in the Vaastu Shastras that the primal pattern of wave is a square formed by four arms - as square waves at subtle level and circular waves at gross level. The former moves in concentric square belts and the latter in circular belts as shown in the diagram below.



WAVE PATTERN

Please note that in the corner zones more waves of energy get concentrated, on account of which those zones are recommended for specific purposes, of course, based on their respective basic or intrinsic qualities. In fact, the Vaastu shastras say that the primary forces or energies namely air, fire, earth and water occupy NW, SE, SW and NE respectively, while the central zone is the seat of the nuclear energy, known as Brahmasthan in Vaastu shastras.

These circular waves can be noticed, when a small stone is dropped on a still sheet of water giving rise to orderly waves of circles expanding right from the centre upto the shore of the pond or lake. These circular waves are said to be physical and visible but these waves at subtle level are stated to be concentric square belts. The central point of the square is actually the point where our thoughts fall like a piece of stone and generate concentric square waves giving rise to the desired form ultimately. The still but square wave is called **Vaastu Purusha Mandala**. The reader could have noticed that Vaastu Purusha Mandala is interpreted from different angles in this treatise and this phenomenon is the key for all visual and aural forms that we meet with in the world of reality.

These wave patterns caused by the pulsation of the space is found to have another significance or property which is very very important and used in the process of designing of traditional architectural forms. This is actually the aim or end product of all the foregoing discussions.

This particular phenomenon is designated by modern scientists as **"Resonance"** - two frequencies of vibration responding to each other, just like the phenomenon of "unlike magnetic poles attracting" each other.

While dealing with the theory of resonance, I cited the examples of two veenas put at a particular pitch, resonating with each other when one is activised.

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What is actually significant about the phenomenon of 'resonance'? What is that phenomenon that occurs when two persons understanding each other during conversations. What is that phenomenon that takes place between a girl and a boy loving each other? What is the phenomenon called Bhakti? What happens when one stands before the imagic form (called God) installed inside the sanctum of a temple? One will be surprised to hear that all these are the resultant phenomena of 'resonance'.

Let us examine this aspect in detail taking two or three veenas for our discussion that is having two identical pitches in two veenas and in the third one of higher or lower pitch. Let us say specifically that two veenas are pitched at Madhyama and the third one at Panchama. When one of the Madhyama Veenas is aroused, or put to pulsate, the neighbouring veena with the Madhyama will immediately respond. This response is called **"resonance"**. This is called **'sympathetic vibration'** in modern physics. In other words, the frequency of vibration (rhythm) is one and the same in the first two Veenas. While these two veenas are resonating with each other, the third veena does not resonate. Why? This is because, the Madhyama Veenas have a fixed number of vibrations (rhythm) while the third one has not. This phenomenon may be stated as a phenomenon based on the identical number of vibrations at a particular period. Does not this mean that the numbers resonate with each other? Yes, this is actually a scientific discovery of a profound significance contributed by the Sthapatya Veda or Vaastu Veda to the field of art and architecture, more surprisingly to traditional architecture of Indian origin. From this phenomenon, a theory has been deduced that number 4 resonate with another 4 causing harmony and also with multiples of four or fractions thereof. In other words, four will resonate with 4, 8,16,32,64....etc. This resonation causes amplitude or growth in terms of sound or sound energy. This may be restated that Sound Spaces resonating with each other at a particular context and measure, causing amplitude in sound space.

There is another example of proving the emanation of resonance, leading to the strange fact that mere numbers resonate with each other. If you stretch a string of 6' long pegged at two ends, on a wooden

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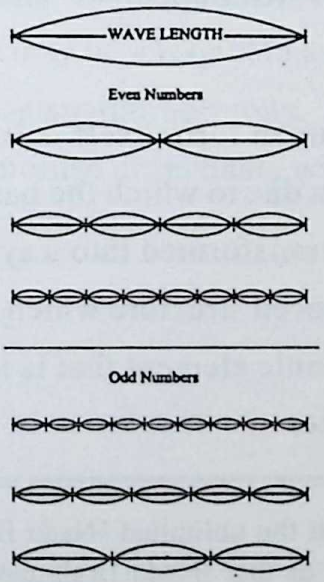
frame or platform and put a bridge underneath at the middle point and pull the two halves up existing on both sides of the bridge will vibrate with equal frequency causing resonance. This is with respect to wave lengths being equal. In this case, the two halves and the full length will create a symphony. Similarly, if the string is divided into four equal parts, and all the parts are aroused, they will resonate with each other because of the frequency being one and the same numerically. The primary long one will also join the team and create harmony or symphony.



These waves of energy represent resonance.
(Odd with odd numbers and even with even numbers.)

The discovery of numbers resonating with each other and causing thereby a sound symphony has revolutionised the arrangement of architectural members and in fact every element that goes into the fabric of the structure. In addition, the secret of manifestation is also implied in this phenomenon of resonance. Let us see how it is occuring or applied in architecture. (Vide diagrams annexed to this chapter).

This particular phenomenon may not look strange for the modern science since the principle of resonance is applied in Radio, T.V. and Telecommunication systems.

But the problem of how these wave patterns cause visual harmony in architectural compositions is resolved mathematically in Vaastu architecture. (Vide diagrams here under). This aspect is actually a subject of material waves of architectural patterns according to Indian Vaastu Shastras. As a matter of fact, it is from the study of sound frequency that material forms have been evolved. In one of the earlier chapters I have unravelled a unique theory of two fold OMs, (OM Sound and OM Light) the discovery of which is attributed to Mayan. Hence whatever I have discussed here (respecting sound symphony) will be applicable to light energy, which is the source material for all visual forms in as much as sound energy is the source

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material for aural forms. This is evident from the fact of Mayamuni in his Maya Vaastu Shastra giving the chapter title as Swara Vinyasa in the table of contents while the chapter dealing with Pada Vinyasa denoting material waves and material patterns.

When we say that numbers resonate with each other, as a corollary it may be stated that two dimensional and tri dimensional forms would also resonate with each other. (Vide diagrams annexed to this chapter). This phenomena may be interpreted as spatial resonance or spatial harmony. That is, spaces harmonise or resonate with each other provided they are caused by one and the same frequencies or of multiples and fractions thereof.

The resonance caused by tri-dimensional forms are very much dominant in the temple architecture as well as building architecture. This is very important when additions or expansions are carried out in building architecture. Most of the ills that clients complaint after additions and subtractions are traceable to the ignorance of the principle governing spatial or structural resonance. This is further analysed and identified as to fall under two categories of frequencies, namely of even and odd numbers. These are noticeable in the sound frequencies of 'Sapta Swaras' [1]- Sa, ri, ga, ma, pa, da, ni resonating with Saptaswaras of upper or lower scale of Saptaswaras. That is, lower 'Sa' will resonate with upper 'Sa' lower 'ri' with upper 'ri' and so on and so forth.

Human form itself is in a state of vibration due to which the basic cubical form is transformed into a symmetrical and balanced structure which is by itself a symphonic element that is in constant resonance.

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1. There is another theory of very great significance that the unlimited 'Nada Brahmam' is limited to a scale of seven swaras as in musicology or that 'Nada Brahman' has a self imposed measure of rhythm.

   We can also say that this scale is limited to '12' taking into consideration what are called anu swaras, that is 5 (7 + 5 = 12 swaras). For 'Sa' to be produced 240 vibrations are needed and to reach upper 'Sa' 480 is required to be produced. Is this not double the basic rhythm? This further leads one to say that double the lower 'ri' would resonate with upper 'ri'. This goes on repeatedly giving rise to a theory of a scale of 'Sa, ri, ga, ma, pa, da, ni' being fixed. This is applied in the field of music and dance. This is further extended to sculpture and architecture of traditional order.

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In fine it must be realised that resonance is not restricted to sound vibrations and sound spaces alone, but it is extended to light vibrations related to resonance of material spaces, in single, double and tri-dimensional forms also.

When we say that numbers resonate with each other, as corollary it may be stated that two dimensional and tri-dimensional forms would also resonate with each other. In two dimensional representation, a square has 4 sides and the area is a×a, the same measure when extended to a×a×a gives a three dimensional 6 sided cubical form. This phenomena may be interpreted as spatial resonance or spatial harmony. That is, spaces harmonise or resonate with each other provided they are of one and the same frequencies or multiples or fractions thereof. This is further analysed as frequencies of even numbers and odd numbers - 2, 4, 8, 16, 32, etc., 3, 5, 7, 9, 11, etc. Since numbers are identified as energies, the corresponding forms also carry the energy thus creating a symphony of energies - either subtle or gross. If a composition of several spaces or forms are made to resonate with each other we create a symphony in terms of spaces or forms. The following designs give some varieties of symphonies. They are spatially harmonised. Now comes into play the primal manifest wave form of the unmanifest, namely, the square, called **Vaastu Purusha Mandala.**

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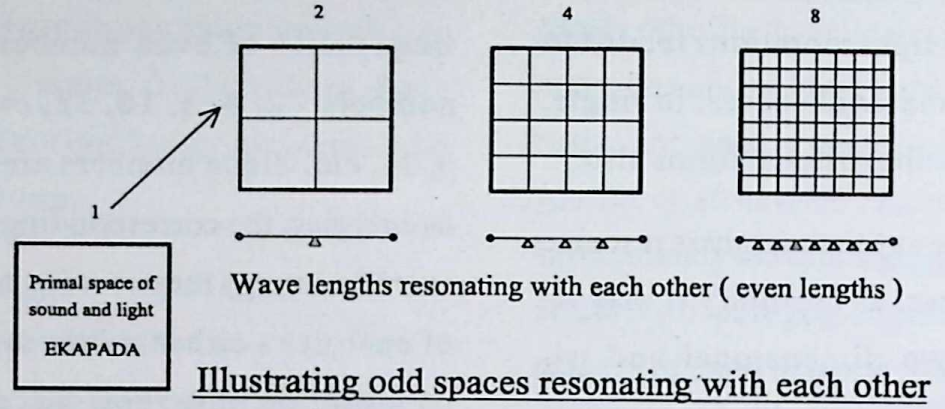
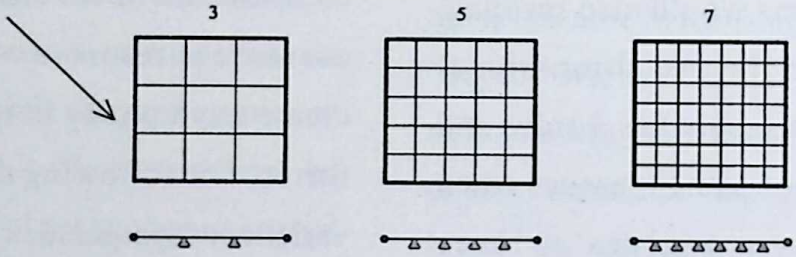
Illustrating even spaces resonating with each other



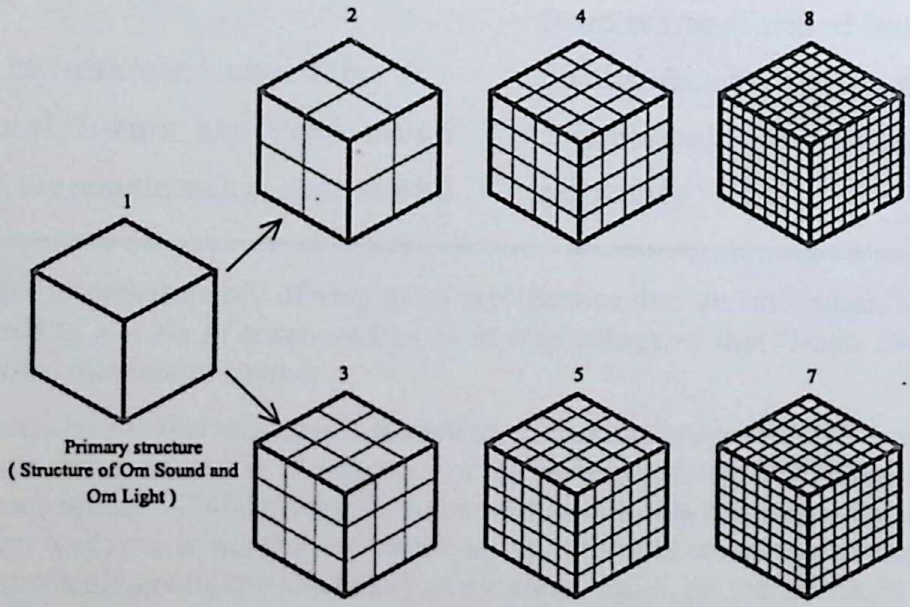
Wave lengths resonating with each other (even lengths)

Illustrating odd spaces resonating with each other



Wave lengths resonating with each other (odd lengths)

Structural resonance of even grids



Structural resonance of odd grids

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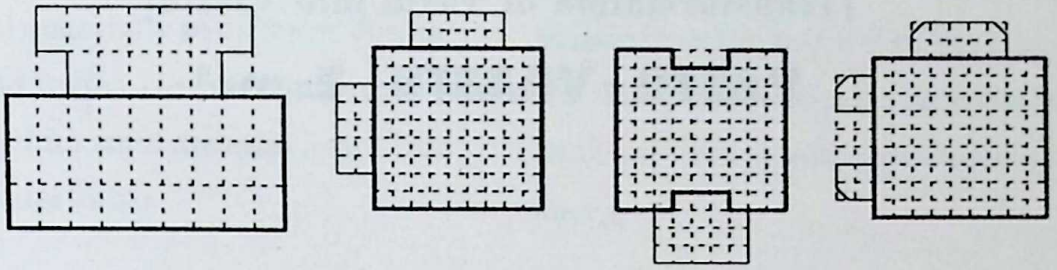
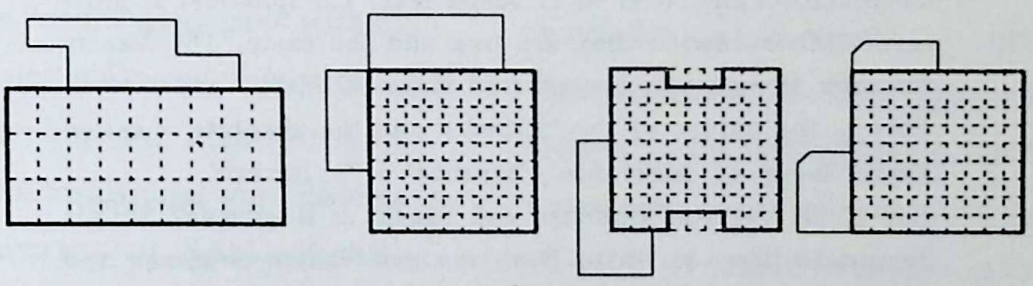
REGULAR ADDITION OF SPACE

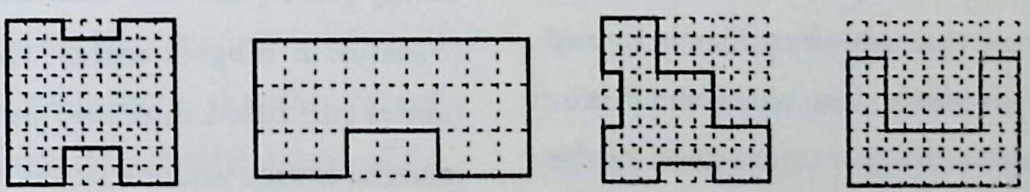


IRREGULAR ADDITION OF SPACE

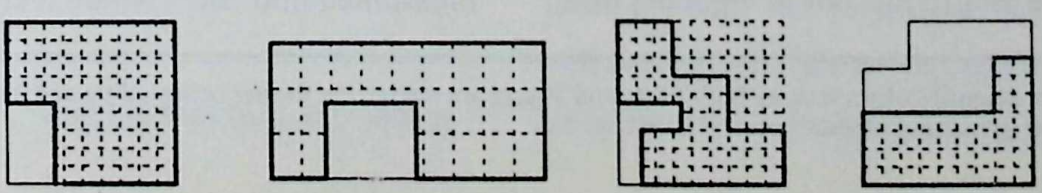


Additions and alterations in a building should be in an orderly manner with respect to the prevailing energy in the existing building. The illustration shows the comparitive technique of adding or removing a room or space in a regular and an irregular method. The regular modular expansion of space is the ideal way to bring forth resonance within a house.The corner of the building should not be deleted owing to the accumulation of primal energies in these zones.

REGULAR DELETION OF SPACE



IRREGULAR DELETION OF SPACE



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13

VASTU REVA VAASTU

[Transformation of Vastu into Vaastu]

VASTU = VAASTU ; E=mc²

The subtle energy is a square two dimensionally and a cube tri dimensionally. It is so at subtle level but spherical at gross level. Measurewise they are one and the same. The Vaastu Purusha Mandala is the unified field of energy and matter. This is the nature of the 'ultimate and the absolute' - called Vastu, meaning 'substance', 'essence' or 'existence'.
Can I call Vastu as Brahman and Vaastu as Braahman? Shilpis designate them as Vastu Brahman and Vaastu Brahman and also as Vastu purusha and Vaastu purusha. Scientifically and mathematically Vastu = Vaastu. Energy & Matter = Matter & Energy.

It is Vastu that metamorphoses into Vaastu. This Vastu is pure energy and Vaastu is embodied energy. We are all Vaastus and that which resides in us and around us is Vastu. Can we accept this as the scientific interpretation of अहं ब्रह्मास्मि 'I am Brahman' तत्वमसि 'You are that?'. Yes, absolutely correct.

The Vaastu formula of वस्तुरेव वास्तु runs parallel, in one sense, to the Einstenian formula of $E = mc^2$ where 'E' is pure energy (Vastu) and 'mc^2' embodied energy (Vaastu). 'E' is again energy wherein lies matter (m) fused into 'one' and 'mc^2' is material energy wherein lies 'E' fused into 'one' with 'matter[1]'. Indian science explored 'E' and came down to or blossomed into 'mc^2', where it created all

[1] Infact or scientifically speaking both Vastu and Vaastu are matter, the former being subtle and invisible and the latter gross and visible.

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things of utility, beauty and serenity and in human context, all forms from hut to mansion, village to city layouts, vehicles and furniture. These are all mc^2 interpreted and created materially in different forms. Even sound forms - articulated words - also change into aural material forms like visual material forms.

Now, let us examine mc^2 where 'm' is matter or mass and 'c' is velocity of light. It is clear that because of the speed of light, the 'matter' associated with light turns into energy. Do you want to call the resultant power, the electromagnetic energy? The traditional terminology is Vaastu Purusha or Kaala Purusha, meaning material energy or product of Time in terms of Space.

But Vaastu science reveals something more and something tangible which we have discussed in the foregoing pages. That is, the subtle particle of energy or particle of space is a square. I interpreted elsewhere, that this primal square is the primal manifest form of the unmanifest. From the modern scientific stand point, it may be interpreted and confirmed as the unified field of energy and matter.

Now, what I gather from mc^2 is that, it may be stated as m (c × c) which means m □ where the square, in Vaastu language, is 'the Vastu / Vaastu Purusha Mandala'. ('वास्तु पुरुषश्चतुरश्र संस्थः'). This indicates the intrinsic order and the core structure of the live cell (human cell) or structure of OM light that emanates from the absolute energy.

This is the subtle material square mandala of purusha. Every such particle of square space of which the vast space is filled with is a square - a mini Vaastu Purusha mandala. This square has the side of 1,86,000 miles according to today's measure of the speed of light. From this I would even go to the extent of saying that the universe is a cube of 1,86,000 × 1,86,000 × 1,86,000 cubical miles taking matter as 'one' unit and at one particular point of time. This can be proportionately reduced to a particle also, which particle of space is the Paramanu-Space created by Paramanu time, which is the fundamental unit of time (speed of energy) at the time of the Big Bang, and still continuing in the same time-space.

From the foregoing discussions it must be clear that Mayonic Science is valid today. But Mayan has gone further deep into the aspect of how E changes

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into mc^2, how Vastu turns into Vaastu, by what measure it has changed itself into gross material form and how this science could be applied in the creation of houses, mansions, towns and cities and also so many other objects of utility and grace.

The cream of the scientific enquiry into the process of Vastu (E) turning into Vaastu (mc^2), is the creation of 'the creator' himself in human form, which, we of the Indian culture, worship in the Temple and the Temple form itself which is also created according to the same formula. The temple and the idol in the temple, are of the same mould, mathematically. Hence one upanishad came to establish this scientific concept of a temple form, as the form of the Divine Purusha. प्रासादं पुरुषं मत्वा पूजयेत् मन्त्र वित्तमः 'Praasaadam purusham matva pujayet mantra vittamaha'. Hence the epithet प्रासाद पुरुष 'Praasaada purusha' (enshrined energy). So it is said that the temple is not merely the home of god but the form of god as well.Along this scientific line, the 'Vaastu Purusha Mandala', the layout of temple itself came to be worshipped first in the scheme of agamic rituals. This is called Mandala pooja or Vaastu shanti. Is this not the primal manifest form of the unmanifest, warranting the worship of the 'mandala' first and foremost?

May I request the priestly community to revive this habit of worshipping Vaastu purusha atleast before Grihapravesa - the ceremonial entry into the newly built house or any building associated with human activities. Let me quote here what the Atharvana Veda says by way of prayer to Vaastospati (Vaastu Purusha).

1. **वास्तोष्पते प्रतिजानीह्यस्मान् त्स्वावेशो अनमीवो भवा न :**

   Protector of the dwelling, recognize us : be to us an excellent abode, the non inflictor of disease : whatever we ask of thee be pleased to grant :

2. **यत् दृवे मद्दे प्रति तद्दो जछषस्व शं षो भव द्विपदे शं चतुष्पदे**

   Be the bestower of happiness on our bipeds and quardupeds. Protector of the dwelling, be our preserver and augmenter of our wealth :

3. **वास्तोष्पते प्रतरणो न एधि गयस्फानो गोभिरश्वेभिरिन्दो**

   Possessed of cattle and horses, Indra, may we, through thy friendship, be exempt from decay : like a father to his sons, be favourable to us,

4. **अजरासस्ते सख्ये स्याम पितेव पुत्रान् प्रति नो जुषस्व**

   Protector of the dwelling, may we be possessed of a comfortable, delightful,

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opulent abode bestowed by thee: Protect our wealth whether in possession or expectation :

5. **वास्तोष्पते शग्मया संसदा ते सक्षीमहि रण्वया गातुमत्या**

and do you (gods) ever cherish us with blessings. Protector of the dwelling, remover of disease

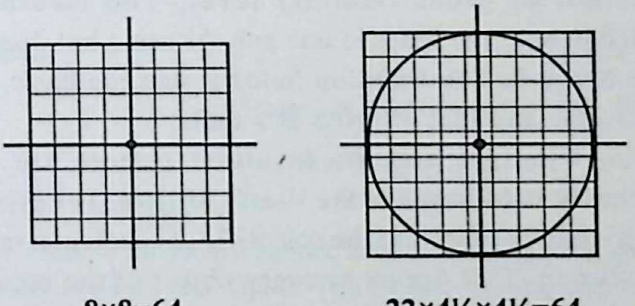
6. **पाहि क्षेम उत योगे वरं नो यूयं पात स्वस्तिभि : सदा न : ।। अमीवहा वास्तोष्पते विश्वरूपाण्याविशन् सखा सुशेव एधि न : ।।**

Assuming all (kinds) of forms, be to us a friend the granter of happiness.

[Rig Veda, 7th Mandala, Page 338 of H.H.Wilson, Nag Publication, Delhi]

This sloka is not only a prayer but also reveals what a 'built space' would confer upon the occupants. This is 'Space-therapy' as understood, implied and applied in the design of the buildings in general.

In the accompanying drawing this is geometrically illustrated. This is self explanatory. Hence no more words to paint the process of transformation from subtle to gross or from E to mc^2.



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14

MEASURE OF EARTH'S MANTLE

Vaastu Purusha Mandala is a square energy grid consisting of 8×8=64 smaller squares of uniform dimensions. This is said to be primal and subtle. This mandala, being subtle life becomes selfconscious, goes into selfspin and grows into another mandala of 9×9=81 smaller squares of uniform dimension. This is called Paramasayika pada (space) while the former is called Manduka pada (space). What is significant in this context is, that the modular measures of 8 and 9 are two fundamental scales for all objects of nature to emerge and grow into form - one at subtle (energy) level and another at gross (matter) level. The measure of the unit space in both the cases is one and the same but diameter-wise they are 8 and 9. The tradition holds it that the basic scale of 8 units is subtle and that of gross is 9 units.

The Primal pattern and the resultant pattern are indicated geometrically as followed in the Vaastu Shastra. The primal square changing itself into circle is the scientific phenomenon taking place in the universe. This occurs in every object of the universe from the amorphous to morphic state of existence. The drawing is self explanatory, henceforth. Without measuring the earth, the mantle of the earth is calculated according to Mayonic tradition. This is a corollary of the scientific theory of cube turning into sphere - Based on this other planets may be multiply or fractionals of the earth is diameter.

The essence of what has been discussed all along is that the 'SUBTLE TURNS INTO GROSS' in a mathematical order. The adjoining diagram explains how the subtle luminous grid of 8 × 8 metamorphoses into the material grid of 9 × 9 without losing its areal or spatial measure. This occurs on account of the self-spin of the subtle energy when it becomes self-conscious. Since space is tri-dimensional it may be stated that the volumetric measure of the subtle and gross particles are one and the same. In other words, the subtle scale of

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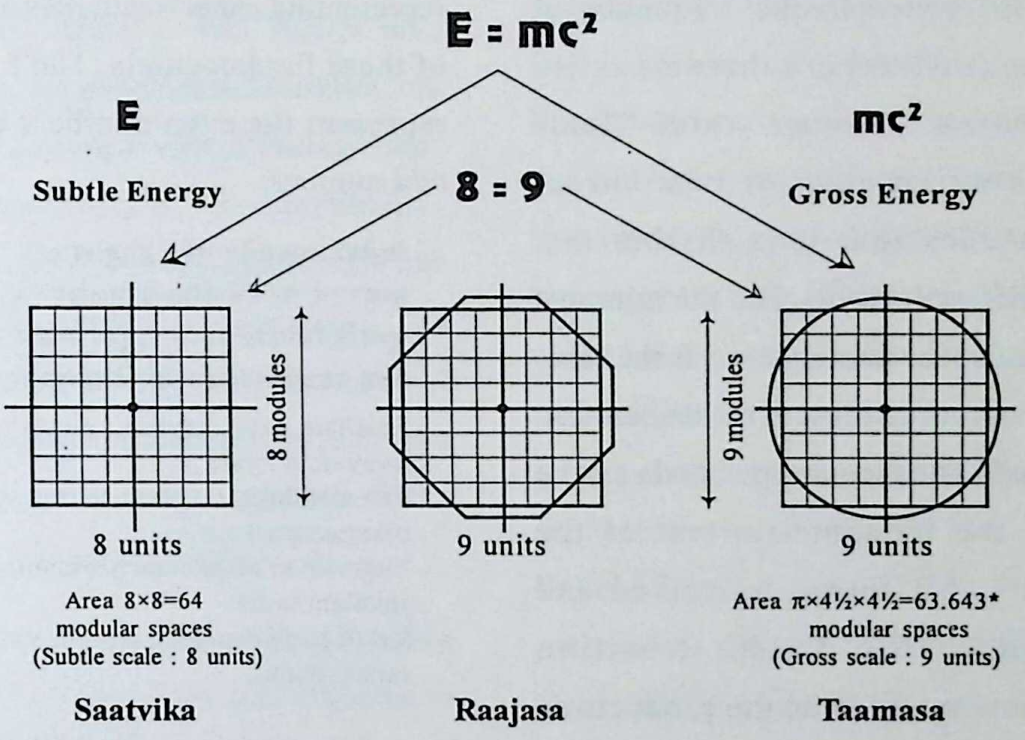
Geometrical illustrations of Subtle energy changing into Gross energy

(The causal element is Vibration or Time inherent in Space)



* Traditionally the area of the Primal square is 64 modular spaces. Areas of square and that of circle are spatially equal. The square turning into circle without undergoing any change in its spatial measure is a geometrical proof of 'अहं ब्रह्मास्मि' "I am Brahman" and $E = mc^2$.

8 digits[1] growing into gross scale of 9 digits makes no difference. That is to say that this 8 becomes equal to 9, measure-wise. This indirectly means that the subtle is equal to gross or the Vastu is equal to Vaastu. वस्तुरेव वास्तु so says Mayan.

This is a universal formula for all objects of nature to materialize at subtle and gross levels. This is directly applicable to the highest and noblest

---

1 The student of Vaastu has to consider 8 × 8 and 9 × 9 as independent units and for that reason every grid is a digital measure or digital scale. These digital measure, I am to say, are numerical measures that give rise to visual forms. Such a deep sense or significance that these measures do inhere!

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creation of nature, the MAN[1]. But there are things in nature that do not fall under the scale. There are different types or varieties. The difference in forms lies in the difference in the frequency of vibration (rhythm) or otherwise called Taala maana. In other words "Taala bheda is responsible for rupa bheda" which means that it is rhythm that causes different forms. But the minutest particle of space namely 8 × 8 is the basic measure of the manifest of the unmanifest. These taala bheda and rupa bheda can be seen in the iconometric text of the Sthapati[2]. All forms conceived and sculpted in the Vaastu tradition would now mean to be the products of Vaastu formula. Under this category we have Bhutaganas in 4 taala, Ganesa in 5 taala and other birds and animals in different taalas. But what is basic is that of Eka Pada or Eka Taala within which 32 types of grids commencing from 1 × 1, to 32 × 32, occur in the inner and outer spaces. We can call them archetypal forms, though permutation and combination may give rise to myriad forms. Let us remember that 8 × 8 and 9 × 9 are fundamental types, the rest representing either fractionals or multiples of these fundamentals. The 8 × 8 padas represent the even numbers and 9 × 9, odd numbers.

[3]एतेषां उक्तसर्वेषु पदेषु द्वयमुच्यते।
तन्मण्डूकं पदंचैव यंतत् परमशायिकम् ।।
युग्मंहि निष्कलं प्रोक्तं अयुग्मं सकलं तथा ।
एतत् पदद्वयं सर्वं वास्तूनां हि सनातनम् ।।

Etesham ukta sarveshu padeshu dvayamuchyate
Tan mandukam padam chaiva yam tad paramasaayikam
Yugmam hi nishkalam proktam ayugmam sakalam tatha
Yetad pada dwayam sarvam vastunamhi sanaatanam'.

The meaning is that "there are two padas[4] that are basic of all padas. They are mandooka and parama saayika. Manduka is said to be nishkala pada with no form (but a point) whereas the sakala represents a form (single unitary square pada formed at the centre of paramasaayika). These two padas are fit

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1 But there is an interesting but significant saying in the Tamil tradition that even an 'ant'-the insect-is eight times of its hand-span. எறும்பும் தன் கையால் எட்டுச் சாண். Hand-span = 1 taala. There is another scientific statement of profound significance which runs as 'எண் சாண் உடம்புக்கு சிரசே பிரதானம்' 'en chaan udambukku sirase pradhanam' meaning that 'head is the basic unit for human form of eight taalas'.

2 Sirpachennool in Tamil, published by Government of Tamilnadu through the Directorate of Technical Education, Chennai (1977), authored by Dr.V.Ganapati Sthapati.

3 Manasara, edited by Dr.PK.Acharya, Chapter 7, Slokas 36 and 37.

4 Padas - spaces or fields.

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for the creation of all forms and hence of eternal order".

Now let us take up the primary material substance, the Earth[1]. According to Mayonic theory this Earth was primarily a subtle substance without any identity. But when it started taking shape it became a cube of 8 × 8 of paramanu-size from which it rose to the present size of a sphere of 7926.57 miles (12,756 kilometres) by means of the inherent quality of going into vibrations. Earth is a living material object. Now we can designate it as egg or anda.

All visual forms of nature have three stages of evolution traditionally known as

[2]**निष्कल** - Amorphous - formless அருவம்

सकलनिष्कल - morpho amorphic - 'misra' or mixed state (egg) அருவுருவம்

सकल - form with limbs உருவம்

Now the Earth falls under the **मिश्र** state of existence.

Under the circumstances we can say that the Earth's diameter is 8 digits which is equal to 7926.57 miles (12,756 km) according to modern geological and geographical estimation. Further, at this context, we have to bring into our discussion the Vaastu Purusha Mandala of 8 × 8 where the outer belt is called Paisachika pada[3], which becomes well cooled and consolidated so as to allow vegetation to grow and human beings to live on peacefully. This assumes the grid of 9×9 at material level. The particular paisachika pada in the Earth's context is the crust or mantle of Earth or soil-content. This works out to 7926.57 ÷ 9 = 880.73. Half of this measure is 440.36 miles which is the crust/mantle of the Earth each at top and bottom. Approximately this is 440 miles. Thrice this measure of 1320 is the diameter of Brahma sthan, the field of fire or heat at the central core. The heat at this centre is the Purusha enclosed by the mantle and by the subsequent inner layers such as Manusha, Deivika padas as

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1 Mayan says that Earth is the primal susbstance (वस्तु) - भूमिः प्रधान वस्तुस्यात् - 'Bhumihi pradhana Vastu syat'.

2

निष्कल	-	अवयव रहित	- limbless, amorphous
सकल	-	अवयवान्वित	- with limbs, morphic, finite form.
सकल निष्कल	-	मिश्र	- mixed (eg. Egg; paramanu, Karu, Bindu, Om, Linga, Space as Linga) morpho amorphic.

3 The inner concentric square belts are respectively called 'Maanusha pada', 'Deivika pada' and 'Brahma pada'.

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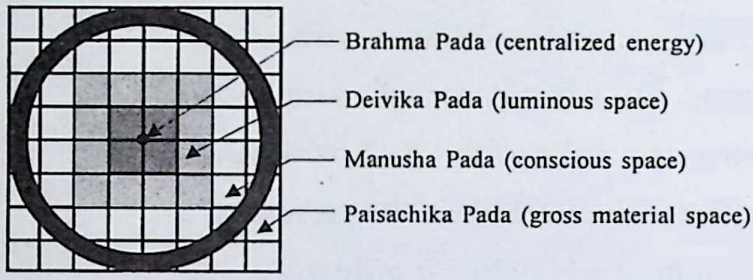
interpreted from the traditional stand point.

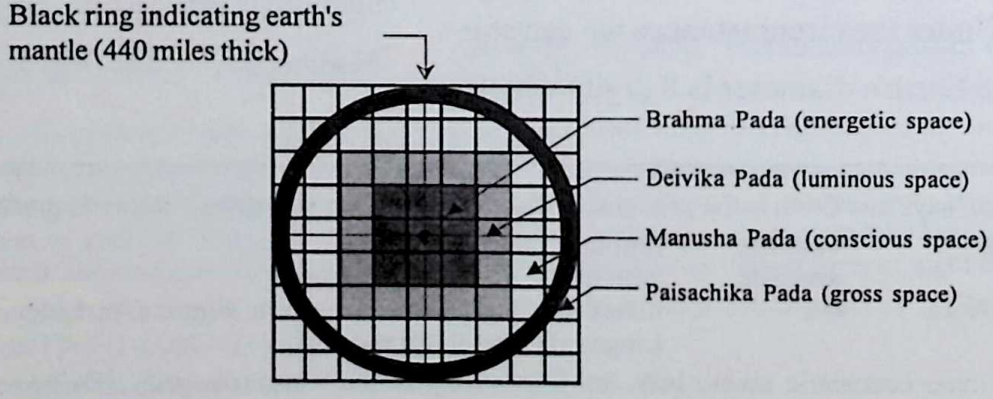
Genesis of the planet EARTH



8 × 8 units

Every atom (Paramaanu) of space at its subtle level consists of four mantles covering the central energy-point which point later blossoms into a gross space. This point of energy is designated as OM light and OM sound. The transformation from subtle to gross takes place because of the self consciousness and consequent self spin of the energy point (OM).

The four sheaths or layers are as noted below. The core one is the energy-particle (Paramanu / Vastu) which is said to lie in perfect tranquilty and bliss. Experience takes place at this point and turns into material expression ultimately. This is mathematically stated as cube turning into sphere without any loss of area or weight. The assumption is that the resulting form is a perfect sphere.



9 × 9 units

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15

MAYAN, THE GREAT SCIENTIST OF BHARAT

Epic and puranic references to the life and activities of Mayan - References in Ramayana and Mahabharata - Certain historical facts about Surya and Chandra Vamsas of North and South - References in Silappathikaram and other Tamil literature - Aryavarta and Brahmavarta, two ancient territories in the North - Brahmavarta as the final settlement of Mayan and his followers - Connection between Mayan of India and Maayan of Mexico - Maayan cities, villages, houses and pyramids based on Maya Vaastu - Adoption of Vaastu Purusha Mandala for Maayan buildings and cities - The city of Guatemala.

Mayan, glorified in Vedas, epics and puranas of the South and the North as a great architect and town planner, was a human being who moved on earth with flesh and blood. He was not a fictitious character of a story or drama. He was born in the family of traditional carpenters in Kumari continent, otherwise called Jamboo-dweepa (நாவலந்தீவு) as already pointed out in the foregoing discussions and repeated at appropriate contexts subsequently. He lived during the Sangam days (10 to 15 thousand BC). He was both an architect and engineer of very great name and fame. He was the original author of Vaastu science and technology titled as Mayamata Vastu Shastra. He was also the original author of Surya Siddhanta, a treatise on Astronomy. These two treatises are available even today. They are Sanskrit works of Mayan. These two works must have been in Prakrit and later rendered in Sanskrit by later day scholars of the Vishwakarma group. Mayan used to be called by shilpis of Tamilnadu as Kaalajnani (Scientist of Time) as the Vaastu is based on Time concept as shown in the foregoing chapters. Identification of Time & Space and Rhythm & Form is a great contribution

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of Mayan to world science (see also the chapter on Vaastu Shastra, a class by itself).

It is he who had designed and built the ancient cities of Kapatapuram called கதவூர் Kadavoor in Tamil in the South and Dwaraka (Sanskrit name for Kadavoor) in the North. Most of the ancient cities were of his own design or based on his Vaastu principles. **The Vaastu Purusha Mandala, the basic square form (cubical tridimensionally) of the subtle particle of energy that pervades the macro space and resides in every living organism as micro space** is the archetypal pattern for all ancient cities and buildings and this is held in the tradition as the supreme discovery of Mayan. Not only the pattern, but the content of the invisible micro particle of energy is another step upward, reached by Mayan. This is concerned with the structure and quality of the cubical micro and macro structure of energy, the Pada Devatas of Vaastu Purusha Mandala representing the positive and negative qualities. And above all, the use of the qualities of micro and macro spaces for human welfare and wellbeing is actually the end of human knowledge and wisdom. In fine, the science is complete at this point and beyond this nothing seems to lie for discovery by human effort.

Mayan was the scientist behind these discoveries and the technologist accredited with the application of this energy in the design of ancient cities and buildings all over the world at one point of time and followed in the field of traditional art and architecture in Indian subcontinent in particular, from the prevedic times.

Modern Vaastu designers should make a special effort to understand and apply, if they want to follow traditional patterns of buildings and also town and city planning. The square layout that they talk of, is not empty or meaningless geometrical square but a square of very great significance. This is the square or cube (of energy / foetus of space விண்கரு) that has sprung into or flowered into graceful human forms, animal and bird forms and into millions of forms in the vegetable kingdom in a particular rhythmic order. The stars, sun and the moon and the planets including our earth - all have originated only from this cube (microbode). All these things are discovered by Mayan as governed by a mathematics of Kaalamana and Padamaana (Time and Space units காலம், இடம்). Look at the variety of forms on

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the temple walls and temple structures and inimitable dome designs and forms. Are not these forms exhaustive? To speak in Indian metaphor, all creations of God exist compressed into this Vaastu Purusha Mandala and its grid and get expressed through poetry, music, dance, sculpture and architecture - the five fold arts or five fold Vedas. Recent researches show that the city of Babylon was on the grid pattern of 25 x 25 = 625 modules and city of Mexico on 32 x 32 = 1024 modules. The city of Pondicherry in South India, the city of Mandaley (Mandala?) in Burma and the city of Guatemala in South America fall under this category.

The celebrated city of Jaipur in North India is said to have been designed according to Maanasara Vaastu shastra, a treatise based on Mayan's Vastu Shastra. Both these treatises are available and are in currency today.

Mayan was also a great sculptor and a painter. Above all he was a scientist, as portrayed before, who explored the origin and substance of the universe and universal objects. (Vide chapter on Genesis of traditional science, art and architecture for details). He was a mathematician, geometrician, geologist, astrophysician, astronomer and atomic scientist as well. He has discovered the existence of sound atoms and light atoms in the outer space (Paramatman), as well as in the inner space (Jeevatman) and their behaviour in the production of aural and visual forms. As he was a great poet, he has recorded all his discoveries, in verse form, first in Tamil-his mother tongue, and later in Prakrit. These were again reported in Sanskrit, which fact is evident from the incomplete and imperfect form of Maya Vastu Shastra. The iconometrical section is missing. The tradition says that there was a section on Nava tandava, a pet subject of Mayan. This too is missing. There has been a remark about Maya Vastu Shastra, that it has undergone three revisions - one prior to the period of Chola, another during Chola and the third after Chola. Similar revision is also noticeable in Saivagama of Tamilnadu.

There were 12 major works of Mayan apart from three other supreme contributions known as **Pranava Vedam**, **Aintiram** and **Agamam** (vide chapter on Vaastu Shastra a class by itself, for details). Some of the original Tamil texts of Mayan are available today. All his original Tamil works contain not only technological materials but also the unique science underlying technological

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principles. Some of Mayan's scientific concepts are found echoed in Upanishads too.

It is Mayan, who created the dancing form of Shiva-Natarajan. There is a mini Tamil text of the iconographical sketch of the Dance of Shiva, which will be published before long. Hence he is called Adi Shilpi and the dance form as Moola Shilpa in the tradition and adored as Viswakarma (by Veda Vyasa) in the epics of the North and the South as well as in the Vedas.

We come across several facts today about his meritorious services, in general, for the Indian culture to originate and spread throughout the continent, but specifically about his expertise and wisdom in science and technology that gave birth to a unique tradition in Art and Architecture. Both in Ramayana and Mahabharata, as well as in Silappathikaram, we have had a good deal of references about his achievements.

Particularly, we have enormous references in Mahabharata to his expertise in building activities as quoted in the succeeding paragraphs. Infact, wherever the word Vishwakarma is used, it is found to mean invariably Mayan only! We have some glimpses of his personal life also in Mahabharata as narrated by one Maharishi, by name, Vaisampayana.

From the first two epics what is further gathered is, that the story of Rama and that of Pandavas should have happened prior to Valmiki and Veda Vyasa and have taken epic-form only later, during the latters' life time. But there is one important historic point to be noted here for anthropologists regarding their remote antiquity and that of Mayan as well. In as much as Rama, Krishna, Ravana and Pandavas are believed to have lived as human beings in the very distant past, Mayan as their contemporary should have also been a human being.

It is but a pathetic fact that such a great personality like Mayan was ignored by local researchers and was thrown out into oblivion. Nobody bothered about him nor thought of him till yesterday. The western scholars were not adequately introduced to the technical treatises that existed in Sanskrit, ie., the Vaastu and Agama Shastras. These two Shastras, that are basically responsible for Indian Culture, did have no place in the History of Sanskrit literature. Is it not surprising? Vaastu Shastras and Agama Shastras are the only technical literature, worth the

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name, in the Sanskrit world. If they are segregated, the weight of Sanskrit literature would go down enormously. That Sanskrit is a cultural language, will stand diminished. The supreme human knowledge and wisdom is better preserved in the technical literature of Vaastu Shastras. It is sad to remark, that such a great soul as Mayan was altogether neglected by the researchers of the East and the West, though there is visibly his most valuable contribution of Surya Siddhanta, a treatise on Astronomy, available today in Sanskrit. Setting aside Maya's name, the authorship was attributed to Aryabhatta. It is not only unfortunate, but it amounts to scholarly blunder.

Ravana, the Lankeswara should have also been the contemporary of Mayan, since we find in Ramayana that he had given away his daughter Mandodari, in marriage to Ravana.

मण्डोदरीं मयसुतां परिणीय दशाननः ।

mandotarim maya sutam parineeya dasaananaha.

The meaning is that "Ravana married Mandodari, daughter of Mayan. (***Ramodantam***) Maharishi Valmiki, in his Ramayana, makes abundant references to Mayan, of which one may be quoted here. Addressing Hanuman, who was directed to go to Lanka to search for Sita, Valmiki says,

मयोनाम महातेजा मायावी वानररिषभ ।

"Mayo nama maha teja maayaavi Vaanararishabha"

This means that Mayan was one who was highly "**enlightened**" and "**a man of bewitching achievements**".

Veda Vyasa, the celebrated compiler and authority on Vedas, makes elaborate references to Maya's creative talents in Mahabharata. He even goes to the extent of equating him with Lord Viswakarma[1], the creator of the universe and also introduces him as a great poet of Danavas. This reference occurs in the context of Mayan expressing his gratitude to Arjuna who saved his life from a fire accident. This factual reference quoted hereunder amounts to Mayan's bio-data. It would be of great historical evidence to anthropologists, to know about Mayan

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1 This title of Vishwakarma was conferred upon Mayan by Veda Vyasa since it was Mayan who discovered the secret of the science of manifestation and the mathematics implied therein. Mayan's discovery is actually the science of manifestation of material forms out of subtle and invisible energy. Hence he richly deserves this great title.

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and his clan, as well as to understand the roots of Indian culture lying covered under the concept of Time and Space[1]. Hence the details are quoted here under, verbatim. Mayan introduces himself to Arjuna by saying,

[2]अहं हि विश्वकर्मा वै दानवानां महाकविः ।
सोऽहं वै त्वत्कृते किंचित्कर्तुमिच्छामि पाण्डव ॥
दानवानां पुरा पार्थ प्रासादा हि मया कृताः ।
रम्याणि सुखदर्शानि भोगाढ्यानि सहस्रशः ।
उद्यानानि च रम्याणि सरांसि विविधानि च ।
विचित्राणि च शस्त्राणि [3]रथाः कामगमास्तथा ।
नगराणि विशालानि साट्टप्राकारतोरणैः ।
वाहनानि च मुख्यानि विचित्राणि सहस्रशः ।
विलानि रमणीयानि सुखयुक्तानि वै भृशम् ।
एते कृता मया सर्वे तस्मादिच्छामि फल्गुन ।

Though these words are articulated by Mayan they are actually the brief note on Mayan by Veda Vyasa himself, the compiler of Mahabharata.

*Introducing himself as the Vishwakarma and the great poet of the Danavas, Mayan says "I have built a number of buildings for Danavas before. **In thousands, I have built houses adequately spaced for comfortable living** (भोगाढ्यं), **visually pleasing** (सुखदर्शं) **and spiritually satisfying** (रम्यम्). I have created a variety of tanks and reservoirs and also gardens with alluring ambiences. Wonderful weapons of war and chariots, I have produced. Spacious towns and cities with huge enclosure walls and entrance arches, I have created. Certain special type of vehicles for civilian use, I have designed, in thousands. Also created underground buildings provided with all amenities for comfortable living. Since I have achieved so much, I request, for an opportunity to do a little for you. O' Arjuna! you have saved me from an accident and I want to do something in return. (This appeal was made to Arjuna who was in the company of Krishna of Dwaraka, at that time).*

While Arjuna refused to have any service from Mayan, Sri Krishna

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1 From Mahabharata - Second book, critically edited by Franklin Edgerton, Bhandarkar Oriental Research Institute, Poona, 1944, Page 2, Slokas 5 and from the foot notes printed underneath.

2 To unearth the essence or roots of Indian culture, one should be able to understand the unique science underlying Vaastu and Agama. The research scholar should be a scientist with background knowledge of Architecture and Engineering. Dr.Sthapati finds such a scholar - scientist only in Robert Lawlor, the author of the books 'Sacred Geometry' and 'Sacred Architecture'.

3 कार्मुकश्च रथा विभो - bows and chariots.

4 Maya Sabha and the laughter of Draupadi! This is responsible for the great war of Bharatam.

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interfered and snatched that opportunity for getting a Sabha[1] built for the Pandavas.

In this context, I would like to interpolate one more historical fact (for historians to ponder over) concerning the good old royal families of North and South who ruled over ancient India.

We all know that Sri Rama hailed from Surya Vamsa (Solar race) while Pandavas from Chandra Vamsa (Lunar race). As regards South, we know that Cholas are said to have hailed from Surya Vamsa and Pandyas from Chandra Vamsa. What is exactly the meaning of these clans being similar in descent? Is it mere coincidence? Does not this remind us of the remote past when there was only one nation called Bharatam with one race and one common culture?

Another fact culled from history is that Sri Rama hailing from Surya Vamsa had inherited from his ancestors the idol of Sri Ranganatha in reclining posture (as in Sri Rangam of the South today) as Kuladhana and worshipped as Kuladevata! This icon was presented to Vibheeshana (Ravana's brother) by Rama when the former attended Pattabhisheka (coronation) ceremony of Rama in Ayodhya.

This event needs deep research by anthropologists about the origin of ancient royal races and the common culture that they had belonged to and nurtured in the soil of Bharat.

The idol of Ranganatha as Vishnu worshipped in Sri Rangam is the one that is in reclining posture and exclusively of Tamil origin and attributable to Agamic and Vaastu culture. Such a figure was not in worship in the North. Similarly worship of Shiva as a dancer is not to be met with anywhere in the North. While this is the case, we have to note that there were two prominent and most ancient temples, one in Chidambaram and another in Sri Rangam - both located in Tamilnadu. They represent **akasa tatva** and **prithvi tatva** respectively (vide details in Sthapati's book on Temples of Space Science). It is traditionally known that they alone are called koils (shrines), one for Vaishnavism and another for Saivism, other temples

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1 Maya Sabha and the laughter of Draupadi! This is responsible for the great war of Bharatam.

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being called **alayam**[1], built during later periods, based on Vaastu and Agamic principles. Hence the question that arises in this context is, that how Rama and his forefathers came to worship Vishnu and possess an idol in this particular posture very much in vogue only in the South. It is rare to see similar idol or a temple as in Sri Rangam even today in the North. Sthapati's opinion based on Vaastu Shastra is, that India should have been inhabited by only one human society with one common culture but with two distinct royal families - Surya and Chandra Vamsas in the distant past. Similar reference to India, having had only one family of human race is being met with in Bhagavatam where it is categorically observed by Veda Vyasa that in the beginning of Kritayuga there was only one Veda (Pranava Veda) and only one society of human beings without any regional or racial denominations. It was only during the reign of Pururavas, that Veda became three and the society disintegrated with different colours. This happened in the beginning of Tretayuga, according to Vyasa.

एक एव पुरा वेदः प्रणवः सर्ववाङ्मयः ।
देवो नारायणो नान्य एकोऽग्नि वर्ण एवच ।।
पुरूरवस एवासीत त्रयी त्रेतामुखे नृप ।

Eka eva puraa vedah pranavaha
Sarva vangmayaha
Devonaarayanonaanya eko agni Varna evacha
Pururavas evaseet trayee Treyeta mukhey nrupa

The translation as done by Swami Tapasyananda of Sri Ramakrishna Math (Srimad Bhagavatam volume-II Skandhas IV to IX Madras edition) is quoted below.

"In the Kritayuga, the Pranava (OM), which includes in it every possible sound, alone was the Veda. And the deity too one only and that was Narayana. So also Agni or sacred fire and Varna or human community, were all single. It was at the beginning of Treta yuga only that the one Veda became three by the action of Pururavas."

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[1] Garbhagriha literally means 'Womb house'. Garbha, in Mayonic literature means கரு foetus, விண்கரு foetus of space. It means bindu too. Hence Garbhagriha is called 'bindu griha', in Agama. This is 'microbode', the main sanctum-to use modern epithets. But 'alayam' is another word commonly used in the place of 'Koil' in Tamil culture. This is a deep technical word. That is, 'laya' is Time measure or rhythm. 'a' ஆ as in Apple means समन्तात् - everywhere, all round. 'a' + laya, therefore means that the sanctum is surrounded by rhythmic spaces-that is, a complex of rhythmic spaces. This alaya is just like the human material body which enshrines the Jeevatman, the inner being. So 'Alaya' is temple complex and Garbhagriha is the central shrine (Brahmasthan). This fact is very clear in the verse of Thirumandiram "உள்ளம் பெருங்கோயில் ஊனுடம்பு ஆலயம்". Also in "देहो देवालयः प्रोक्तो जीवो देवः सनातनः".

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From this it must be clear that during those days when Bharata desa was one, Rama's ancestors should have performed the worship of Vishnu in this posture and this is the idol, given away as gift to Vibheeshana. Can we say that this is the occasion that Rama had thought of his original home and culture and tried to keep integrated the South and the North into one nation? Rama did not estrange himself from the South. This, ofcourse needs further research. Perhaps Rama wanted Vibheeshana to take back the property of the South and reanchor it in his land for the welfare of Srilanka. If further gone deep into the culture, one would find that the Surya and Chandra Vamsas was prevalent all over India without any distinction or discard. Perhaps this may be the reason for the South accepting the place-names of the North, for these places, said to have been travelled over by Rama in search of Sita. Perhaps it might be the time when India was one piece of land with no break in the land mass. Will the anthropologists pay attention and probe further into the prevedic India and its culture? Sthapati, who approached this problem of cultural identity through science and technology that had originated in the distant past is driven to the conclusion that Rama, Krishna, Pandavas, Cholas and Pandyas must have lived in Kumari continent as two distinct royal families and got separated for centuries due to the continental drift that had occurred in the South in the very remote past! There is also a reference in Tamil literature of one Chera King Nedun Sorupadaitha Seralathan (நெடுஞ்சோறு படைத்த சேரலாதன்), who is said to have fed the army of the two warring camps in the Kurukshetra war. He is said to have carried carts - full of cooked rice for the soldiers.

In Silappathikaram, (2nd century A.D.) one of the Pancha maha kavyas of the Tamil race, there is a reference to a Chera King going to the North and bringing gifts from the North Indian Kings. The reference reveals one historical fact related to Mayan and his great skill in carving. Unpacking the bundle of gifts, the King remarks நுண்வினைக் கம்மியர் காணா மரபின மயன் விதித்துக் கொடுத்த மரபின இவைதாம். **This means that the gifts collected from the North bespeaks of the dexterity of Mayan, all executed according to Mayan's principles of rhythm, form and space.** Further the King reveals the fact that Mayan was a "**tradition builder**" and his

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tradition was in force in the North, at that time. Some glimpses of life and work related to the shilpis of India, it is believed, would be of interest to the historians and anthropologists and hence added here.

The shilpis of India, though scattered all over the sub-continent today, speaking different languages, belong to one aboriginal creative tribe, their illustrious forefather being Mayan. They are called Vishwakarmas, as they follow Vishwakarma Maya's tradition (Viswakarma tradition) of art and architecture. It is they who flooded the country of Bharat with stupendous monuments, towns and cities - all according to Maya Vaastu. Even today, they live under a **common flag of five colours** and an association called '**Akhila Bharateeya Vishwakarma Maha Sabha**' with headquarters in New Delhi and with working Presidents in every state, from Kashmir to Kanyakumari and Gujarat to West Bengal.

Recently (June 2000), in Orissa at Puri, there was a convention called '**National Congress 2000**' where more than 3000 delegates (Vishwakarmas) from all over India met and discussed their professional problems. In South India, where the Vaastu tradition is vibrant, the Vishwakarmas of South India periodically meet and discuss about their past and appeal to the respective state governments for their revival and uplift, so that they may rejoin the main stream of nation building activities. The Government of Tamilnadu have established a College of Art and Architecture in Mahabalipuram in 1957. It has produced a good number of sculptors and architects who are working on temple projects all over the globe, particularly in USA. The 'Sthapati' of this book, who was the principal of this college for about three decades, is taking leading role in the propagation of the science and technology of Vaastu Shastras besides establishing temples, all over the world. According to him, the cream of Indian culture is represented impressively in temple structures and imagic forms. Thus he has created a world wide awareness about Vastu and Vaastu (vide website-vastuved.com). It is he who designed and built the 133 feet high statue of Thiruvalluvar, a great saint and poet of Tamilnadu who is said to have lived between 2nd century BC and 2nd century AD. This statue, built in granite and weighing 7000 tons is erected on a hillock

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in the mid sea, in Kanyakumari, said to be the remnant part of Kumari continent of the bygone days. **This is today appreciated as the eighth wonder**. The uniqueness about the statue is, that in the design and construction, the traditional Vaastu technology was applied cent percent, without introducing concrete or steel beams or slab or any modern technology anywhere in the statue. It is hollow too from head to foot. Why all this narration? It is just to reveal that the age old technology is still relevant, valid, reliable and still alive in the South. Thanks to the Government of Tamilnadu for establishing a College and sponsoring such projects for the rehabilitation of the dying art and architecture. There is another monument commemorating the great saint and seer, Thiruvalluvar in Chennai, the headquarters of Tamilnadu. It is a monument, a temple car of huge dimensions, all in stone, called Valluvar Kottam (1976). These two monuments (the best two of 20th century) were sponsored successfully by Hon'ble Chief Minister Dr.Kalaignar M.Karunanidhi. Appreciating the skill and expertise of the Vishwakarmas of Tamilnadu and the need for the continuance of the hoary tradition, Dr.Kalaignar has established a government institution called "**Artisans' Welfare Board**", கைவினைஞர் நல வாரியம் announcing it on 30th July 2000, at a felicitation function organised by the Vishwakarmas of Tamilnadu, graced by leading Vishwakarmas of Karnataka, Telugudesa and Kerala as also from Bihar and Maharashtra.

There is also a historical reference in Silappathikaram (2nd century AD) to Shilpis of Tamilnadu, Maharashtra and Uttarpradesh ('அவந்திக் கொல்லரும், மராட்டக் கம்மரும், நண்டமிழ் நாட்டுக் கைவினைஞரும்', the blacksmiths of Avanti, Karmakar of Maharastra and the master craftsmen of Tamilnadu) having joined together in one place to execute a project in Tamilnadu, thereby justifying the pan Indianness of the Vaastu technology and Vaastu profession.

In the recent past about 2 years ago the 'Sthapati' executed a temple project in Chennai, with Garbhagriha and Vimana in Dwaraka Architecture. The sthapati did the Garbhagriha according to Dwaraka style in granite stone, while the Vimanam above terrace level was contributed by Sthapati Sompura of Gujarat in sand stone. This is the first time in the recent history that the intricate features of

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Dwaraka architecture were rendered in hard granite stone. The sthapati did not face any problem of design and execution in this particular project. This reminded of the Silappathikaram days when Sthapatis of North and South joining to do a monument, which brought name and fame to both of them.

Thanks to Ms.Madiyoli Saraswati Ammai மதியொளி சரஸ்வதி அம்மையார் of Chennai, the Sthapatis' patron, for unifying the shilpis of North and South in her sacred project - construction of Sri Nandalala Temple, Mylapore, Chennai. The Sthapati's dream of unifying shilpis of India met with success, though not in a big way.

Mayan's contribution to the technical lore of Tamilnadu and Bharat has been discovered to be unlimited. (Vide details of his contribution in the chapter on 'Vaastu Shastra, a Class by itself).

There is one eminent work on Astronomy known as Surya Siddhanta, the first of its kind, authored by Mayan himself. Recent scholars who have gone deep into the text say that Mayan was the first scientist to identify and report on the motion of planets. It is also observed that some of the findings of Mayan have not been reached by modern astronomers. Mayan was a versatile genius having touched many an aspect of material as well as spiritual science in the very remote past.

Sthapati, on an exploratory visit to Maayan land of Mexico, has brought to light that Mayan of India and Maayan of Mexico were one and the same person. He brought to light, the technological and cultural connections between the two. He has revealed also the secret and sacred science behind the design of the pyramids. The application of the concept of grid system for buildings and cities was identified everywhere and more spectacularly in the layout of the city of 'Guatemala' in South America. Sthapati's discovery was appreciated by an American explorer in the following words.

On referring the article of Sthapati's visit to Maayan Land, Mr.Lt.Lawrence Grego, USNR,(Ret.), 693, Coral Circle, St.Augustine, fl.32084, USA, Comments, *"Your discoveries are quite incredible! In the 20 years I have been studying South America, you are the first to offer proof of the connection between India and South and Central America."*

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Indian race is culturally and emotionally one, though looking superficially like a spectrum with diverse colours. If this problem is scientifically and technologically approached, so many confusions and miconceptions about our hoary past and culture would disappear. This idea gets reinforced by the fact of persistent interaction between North and South at cultural level - as pilgrims and tourists - from the early times till date. All the differences that had cropped up and what we see today are superficial and due to communication gap, and neglect of the study of technical literature of Bharat over the years.

There is another historical point to be conveyed to the research world. This is something related to the period around the continental drift that has taken away the southern part of India. At that time, the people inhabiting the southern hemisphere, hit by the land disturbances fled towards North. The Tamil Academy, said to have existed at that time, got swallowed by the sea, and lakhs and lakhs rendered homeless. The Pandian king of that time, by name Thiruvil Pandian, offered protection against the havoc caused by the deluge and also gifted lands for the destitutes to get themselves rehabilitated. Hence he was named by the traditional scholars as நிலந்தரு திருவில் பாண்டியன் Nilan tharu Thiruvil Pandian - meaning the Pandian who gifted lands for all, affected by the deluge.

In spite of royal protection, against the fear of another deluge, a large part of the Tamil society moved Northward and settled in different parts of Bharat. The shilpis too went along with them and settled in different regions. These people carried their tradition of science and technology along with them and raised towns and cities, mansions and huts according to Vaastu, all over the North. This is how the Vaastu tradition came to flourish as pan-Indian. One team of shilpis, following the foot steps of Vishwakarma Mayan, settled on the banks of river Saraswati in the far North carving out a territory called Brahma Varta as permanent settlement for the rest of their life, wherefrom Mayan preached and propagated the Sthapatya Veda found today as a part of Pranava Veda mentioned by Veda Vyasa in Bhagavatam. According to tradition, this is the place, wherefrom he taught the aged maharishis of the North (Sapta rishis) himself sitting

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under a banyan tree, the five fold Vedas - Sabda, Gandharva, Natya, Sthapatya and Pranava - and earned the name of Jagat Guru and Vishwakarma.

Sthapati's penetrating research into the origin and mission of Mayan, has revealed a fact that Dakshinamurthy worshipped as Shiva Guru and installed on the South side niche (Koshta) of the temple building is none other than Mayan. The name itself proves that he was a southerner. In this connection, scholars' attention may be drawn to a fact that there is an independent temple for Dakshinamurthy in Suchindram, near Kanyakumari (the residual land mass of Kumari continent) where there is a custom to bow to him first on entering the temple. This tradition appears to be very old and primary step for Dakshinamurthy to be raised later to the status of Shiva Parivara as well as Disamurthy (directional deity) in Saivaite as well as Vaishnavite temples.

Recent researches reveal that the neighbouring states of Kerala and Karnataka have had considerable connections with Mayan and the technical culture that he had established in the south during his early days. As a matter of fact, it may be observed that Keralite shilpis were great experts in the design and execution of Temples and residential buildings in wood, the knowledge and wisdom of the trade having been inherited from Mayan. This fact is reinforced by the fact that shilpis of Kerala of yesteryears and today are called Mayacharyas just as the descendents of Maya are called Maayas in South and central America. The temple and house desings of Kerala, as we see today, are primal forms of Indian art and architecture. This is noticeable in the Mayamata Vastu Shastra where timber architecture has enjoyed exclusive focus and detail, not that much focussed in other Vaastu Shastras of Indian origin. It may be added that this is echoed in Tibetan, Chinese and Japanese architecture as well.

Further, in the culture of Maayas of Mexico and Mayacharyas of Kerala, one can find abundant similarities in costumes, ornaments, house hold utensils etc. This I have recorded in my monograph entitled 'Sthapati's Visit to Maayan Land'.

As regards Mysore, which has given birth to great Sanskrit scholars and great shilpacharyas, it may be remarked that the name of Mysore itself carries the

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name of Mayan. It is not Mahishasura but Mayasura that has become Mysore, the Head Quarters of erstwhile Karnataka.

Further there has been a traditional belief that one Dakshinacharya was responsible for the unique style of architecture and sculpture dominant in Karnataka. The original name of Dakshinacharya was Dakshinamurthy which metamorphosed into Dakshinacharya, Dakkanacharya and finally into Dunccanacharya sounding like an English name. As Dr.S.K.Pandian, I.A.S., has identified, this Dakshinamurthy is the originator of Saivite religion and culture, and he is none other than Mayan, called தென்னவன் (Southerner) Tennavan. I am glad to record here that the Karnataka Government has been honouring Karnataka shilpis in the name of Dakkanacharya under the aegis of State Shilpa Kala Acadmey.

Further Mayan, the author of Aintiram, must have been named as Indran, which fact is noticeable from the name of Mayendra ma malai of Kumari continent. There is another historical reference to Tamilnadu having conducted a periodical Indra vizha (Indra festival) in Poompuhar, the cessation of which is said to have led to the destruction of Poompuhar city by oceanic currents. There is a Vaastu Shastra (available with all Shilpis of Tamilnadu) entitled **Aintiram / Aintramatham** which is looking like another Mayamata Vastu Shastra, in substance and treatment of textual matters. So, it must be clear that Mayan, Indran, Viswakarman and Dakshinamurthy are all names of one and the same person, though they have suffered distortion in later day puranas. Scholars have to go into this matter and offer their verdict. History of the South and in particular Tamilnadu is buried in the Sanskrit works rather than in Tamil literary works. Such an inference of Dakshinamurthy as a great personage and a Siddha Purusha is also experienced and identified by the great scholar Dr.S.K.Pandian, I.A.S., who had attempted to unfold the prevedic culture of South India. Mayan was also a Siddha, which fact is discovered by Dr.S.P.Sabharathnam, Director of Indian Institute of Indology, Chennai, who is making a deep study of Siddha literature. According to him, Mayan's name is frequently met with in the Siddha literature.There is a reference in Vaivaswata maha purana about the link

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between Maya and Vyasa where Vyasa extols Mayan in glorious terms[1]. This is actually the place (Brahmavarta) where Mayan, the timber Architect, had his workshop established and wherefrom he carried wooden trusses to build the famous Mayasabha, for Pandavas.

The rest of the Maayans who had got into the whirlpool of oceanic currents, got drifted away to present Mexico, carrying with them the 'sacred architecture' and 'sacred geometry', with the knowledge of which they raised large mansions, huge pyramids, stone built residential buildings, cities and villages - all according to vaastu technology. All these things the Sthapati, was able to identify when he visited Maayan land in 1995, along with two American Engineers. (vide details in "Sthapati's visit to Maayan land" a monograph presented at the 2nd International meet on Vaastu held in Thiruvananthapuram, Kerala, India).

Side by side with Brahmavarta, there was another territory called Aryavarta, where the Aryans had come and settled with their cows and horses - from outside India. This may be the first entry of Aryans into India, as scholars of today infer. The territories of Aryavarta and Brahmavarta are indicated on the Indian map by the Chief Engineer of Mysore State in his book on Indian Architecture[2].

If you look at the picture of Mayan that I have painted here, the readers with cultural back ground would feel like looking at the picture of Dakshinamurthy, seated under the Banyan tree and preaching the essence of Vedas

[3]ओङ्कारं मूलमन्त्रं मुनिजन सहितं
वेदसारं शिवाख्यम्

"Om karam moola mantram munijana sahitam vedasaram sivakhyam"

The essence of the Vedas is 'Shiva' and the moola mantra is OM, Omkara (the dot sound or syllabic sound). He taught this to the aged maharishis seated around him. [Shiva is all pervasive space (aakasa) wherein are contained OM sound and OM light, as discovered by Mayan].

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1 Vide monograph on "Maya and Vyasa" by Mahamahopadhyaya Dr.Pedapatti Nageswara Rao of Hyderabad.

2 A.V.T.Iyer's Indian Architecture, Chief Engineer, P.W.D. Mysore. (See 'General Introduction')

3 Sri Shankara on Dakshinamurthy.

मौन व्याख्या प्रकटित परब्रह्मतत्वं युवानं। वर्षिष्ठान्ते वसत् ऋषिगणैः आवृतं ब्रह्मनिष्ठैः॥
आचार्येन्द्रं करकलित चिन्मुद्र मानन्दमीशं। स्वात्मारामं मुदित वदनं दक्षिणामूर्ति मीडे॥

चित्रं वटतरोर्मूले वृद्धा : शिष्या : गुरुर्युवा।
गुरोस्तु मौनं व्याख्यानं शिष्यास्तु छिन्नमानसाः॥

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In the last line of the dhyanasloka[1] we find that Dakshinamurthy[2] was seated on the Mount Kailas of which he was the lord. This Kailas, according to Dr.SP.Sabharathnam is Mahendragiri that had existed before the Maha pralaya (deluge). Further it is gathered that there were two more Mahendragiris in the South, one in Andhra, near Srikakulam and another near Nagercoil in Kanyakumari district, which is actually that part of Kumari continent left behind after the continental drift. What is to be concluded is that Mahendragiri was initially in Lumerian continent where Mayan lived and preached Vedic knowledge (Sabda, Gandharva, Natya, Sthapatya and Pranava). This is confirmed by Manicka Vasakar, (7th century A.D) a Saiva Saint and preceptor, in his Thiruvasakam, a devotional literature with scientific and historical flavour.

மன்னுமாமலை மயேந்திரம் அதனில்
சொன்ன ஆகமம் தோற்றுவித்து அருளிய

"Mannumamalai mayendiram adanil sonna agamam totruvithu aruliya"

This is actually the Mahendragiri or Mayendra mamalai (the abode of Mayan) that had existed in Kumari continent and the same name should have been given to the hills and mountains wherever Mayan had stayed for short periods on his way to the North, where he carved out a territory named Brahma Varta. He could have stayed in Mysore in Karnataka and also in Andhra near Srikakulam. So these are all names of the original Mahendragiri that had been swallowed by the sea. Similar instances of naming the new places with old name has happened in the case of Madurai (Kapatapuram). The human tendency or sentiment all over the world has been to name new settlements with old ones. Even today, it is happening. Those who migrated from UK to USA have named their settlements in USA as New England, Newyork etc. This is purely sentimental and no race is

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1 रुद्राक्षं वन्हि हस्तं उडुपति सहितं भस्मनो धूलिताङ्गम्
उल्लासं पद्मपीठं हुतवहनयनं ऊर्ध्व गङ्गाधरेशम्
ओंकारं मूलमन्त्रं मुनिजन सहितं वेदसारं शिवाख्यम्
वन्दे कैलाशनाथं सकल सुरगुरुं दक्षिणामूर्तिं मीडे
- Dhayanasloka for Dakshinamurthy image as followed by Shilpis of Tamilnadu.

2 There has been a feeling and talk among shilpis of Tamilnadu for a pretty long time that Dakshinamurthy was the Jagat Guru and he was Adi Shankara. As such he has been brought under worship by later day Gurus, Yatis and Sanyasins. This needs unbiased research by competent scholars. If Mayan and Dakshinamurthy are further proved to be one and the same person, it is believed, that the mystery shrouding Adi Shankara and his origin will get resolved.

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an exception to this practice. The same thing had happened in India too, in the remote past.

One thing, I would like to point out at this juncture is, that historians have ignored the study of the technical aspect of Indian culture and had been in search of mostly epigraphical evidences. History of architecture as gleaned from inscriptions is scanty and they do not deal with the past. Since, as defined by Prof. Percy Brown, 'Architecture is the matrix of civilisation' ("ஒரு நாட்டின் நாகரீகம், பண்பாடு ஆகியவற்றுக்குக் கருவாய் இருப்பது அந்த நாட்டின் கட்டிடக்கலை"), the genesis of Indian culture has to be identified in the history of those who had held and practised the cultural sciences.

I am sorry to observe that no scholar of the East or West has understood the Indian culture in its true perspective. Most of the remarks or appreciation of Indian culture are either euologistic or influential because of its great antiquity. This is the reason, that in my book on Vaastu Shastra, I have attempted to highlight the scientific aspect rather than the aspect of technology which can be easily understood from the available texts.

In fine, I would like to say that the real culture of India lies hidden in its art and architecture or Iyin Tamil ஐந்தமிழ் or இயல், இசை, நடம், சிற்பம், கட்டிடம்- poetry, music, dance, sculpture and Architecture. I call them Vedic in view of the fact that this science and technology are dealt with in Sabda, Gandharva, Naatya, Sthapatya Vedas, though they had been pushed to the secondary status during the post vedic period. I used to call these Vedas as living Vedas or Vedas in action, productive of tangible material results and leading to spiritual realization within the built environment.

Mayan was indeed a महातेजस्वी ('mahatejasvi'-highly enlightened) and मायावी ('maayaavi', a man of wonderful feats and achievements), as remarked by Maharishi Valmiki in his Ramayana.

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SHILPA VIDYĀ RAHASYOPANISHAD
VAASTU SŪTROPANISHAD

The indepth study of Silpa-Vaastu sāstras and the Āgamas, and that of Mayan's original works available in Tamil, emboldens a well-balanced and impartial reader to state that the study of the Vedas still remains shrouded and incomplete. The Vedas are to be studied and properly understood by those persons whose heart and mind have been illumined and perfected by the systematic study of Āgamas and Vaastu scriptures. So far neither the Vedic scholar nor the researchers working in the department of philosophy or religion of the universities of India and abroad has sincerely tried to understand the exact meaning of the first mantra of the Rig Veda. The Āgamic scholar could easily understand that the first mantra of the Rig Veda speaks of the five concentric belts of cosmic structure. But this sort of accurate understanding does not occur in the case of other scholars who desist from the study of Āgamas and Silpa sāstras. In none of the Rig Vedic commentaries and translations that have appeared so far, the implication of the five belts of cosmic structure has been referred to. But wherever this mantra is recited in temples, it is recited only with the sense of cosmic belts.

This is just one example to show how the Vedic mantras still remain partially explained, or unexplained and unrealised. The same inadequacy and incompleteness is present even in the study of the upanishads. There is a vast difference between the methodology of understanding of a reader who has studied all the 108 upanishads enlisted in the Mahopanishad and that of a so-called scholar who limits himself to the study of

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Dasopanishads. (Ten upanishads commented upon by Sankara). In the list of 108 upanishads, there are certain upanishads which are more important than the Bruhadāranyaka and Chandokya upanishads. But, unfortunately, these important upanishads are still being set aside by the scholars.

Apart from the 108 upanishads, there are some more upanishads affiliated to the four Vedas. Indeed, it is these upanishads that reasonably seem to be more spiritual, more scientific, more practice-oriented and more technical than the others. It is to be stated again here, that there is a vast difference between the understanding efficacy of the reader who has studied these upanishads (not included in the list of 108) and that of the reader who limits himself to the study of 108 upanishads. This is because these non-listed but authentic upanishads copiously reveal the most basic and subtle principles of cosmic science and cosmic structure; such principles have not been exposed or expounded in other upanishads.

As available now, there are six important upanishads which are not included in the list of 108. They are:

1. Āgama sāra nirnayopanishad.
2. Vaastu sūtropanishad.
3. Silpa vidyā rahasyopanishad.
4. Arunopanishad.
5. Māhamudropanishad.
6. Mahābinduupanishad.

Āgama sāra nirnayopanishad is of utmost importance, in that it explains the exact meaning of as many as 97 Rig Vedic mantras which are frequently recited in Temple rituals. Of these 97 mantras, 27 mantras are not available in the printed editions of the Rig Veda. This shows that original Rig Veda could have been modified or distorted probably during the medieval period. It is to be noted that these 27 mantras are still preserved and neatly recited by the Sivacharyas of Tamilnadu. It is in this important upanishad the exact meaning of the first mantra of the Rig Veda as pointed out earlier has been duly explained. This upanishad belongs to the Rig Veda.

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Vaastu sūtropanishad and the Silpa vidyā rahasyopanishad are the important texts affiliated to the Atharvana Veda. They provide a proper back ground to understand the significance of Vaastu Vidyā in being a unique science that enables the human mind attain the supreme knowledge related to the Primal Vastu through the knowledge of forms and structures (brahma jnāna through pratimājnāna). They perfect our mind in such a way, as to see everything as the expression of Silpa.

Arunopanishad, establishes the concordant identity between Sri Chakra, microcosmic frame and the macrocosmic structure and expounds the subtle principles of Sri Chakra not to be easily understood by the uninitiated. Mahāmudropanishad deals with the esoteric significance of a unique posture and gesture known as 'mahā mudrā' and the Mahābinduupanishad elaborately deals with the highly concentrated potency of the central dot of Sri Chakra and teaches how the central dot itself should be contemplated as the great Yantra. The last two upanishads namely the Mahāmudropanishad and the Mahābinduupanishad underline a close link between the discipline of Sri Vidyā and that of Tantric Buddhism.

Without studying these six upanishads, no philosopher could justify his study of Vedic texts and the so-called principal upanishads (i.e., dasopanishad).

Now, let me invite your attention to the present text, Shilpa Vidyā Rahasyopanishad.

This is a beautifully worded text which brings out the all-inclusive potency of the cosmic science known as 'Silpa'. Silpa, in its ordinary usage, simply means 'sculpture'. But, it is to be understood that the term silpa is associated with innumerable shades of meaning. To be precise and accurate, 'silpa' denotes everything and every action that contribute to the harmony of the world-system. The Supreme Primal Existence known as Vastu creates the entire range of world system (known as Vaastu) through silpa, and consequently maintains everything that was created by him harmoniously through silpa. This is the secret exposed in this minute but magnificent text.

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This upanishad very daringly declares that those who do not understand the exact message of the Vedic statement "anoraniyān, mahato mahiyān" (meaning: "the ultimate minutest point within the smallest object and the ultimate greatest boundary which encompasses the greatest one". Generally, it has been translated as "smaller than the smallest, greater than the greatest". But, please think it over. Does it make any sense? This basic fact of science has not been understood by any of the translators and as such were not able to comprehend the secret of Silpa Vidyā. At one stroke, this text establishes that there does exist an inseparable link between **Brahma Vidyā** and **Pratima Vidyā**. The knowers of Silpa Vidyā could easily understand that the statement 'anoraniyān mahatomahiyān' indicates the functional process and the technical application of the Vaastu Purusha Mandala.

The text further declares:

"मनसा सत्सृज्यो विश्वकृदः तत्सर्वं शिल्पमेव भवति"

Manasā satsrujyo viswakrudaha tatsarvam silpameva bhavathi

"Whichever is designed and created by the All-doer through his mental ideation, all of those creations become characteristically known as 'silpa'.

To quote some more enlightening passages:

"By means of harmonious activities pertaining to Silpa, the world earns meritorious fruits. Men become the knowers of Supreme Existence only through Silpa. If they do not become the knowers of Supreme One, it is because they do not understand what is Silpa".

"All those activities related to the world and those related to the Vedic realm - are, indeed, the graceful expression of Silpa. Even the perfection that has blossomed within the heart of the knowers of the Supreme One, is, indeed, an expression of Silpa".

The important message encapsulated in this text is:

"जगत्सर्वं शिल्पमेव भवति"

Jagath sarvam shilpameva bhavathi

"The entire world-system is nothing but the harmonious expression of Silpa".

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If we substitute the term 'brahman' for 'silpa', we can easily observe how this message is echoed in the Niralambopanishad:

"स ब्रह्मा स विष्णुः स ईन्द्रः स शमनः स सूर्यः स चन्द्रस्ते सुरास्ते असुरास्ते विशचास्ते मनुष्यास्ताः स्त्रियस्ते पश्वादय तत् स्थावरं ते ब्रह्मणादयः ॥"
"सर्वं खल्विदं ब्रह्म नेह नामास्ति किंचन ॥"
Sa brahmā sa vishnuhu sa indraha sa samanaha sa sooryaha sa chandrastey surastey asurastey visachāstey manushyāsthahā sthriyastey pashvādaya tat sthāvaram tey brahmanadāyaha.

Sarvam khalvidam brahma neha nāmāsthi kimchana.

Most of the upanisadic texts declare that **"all is Brahman", "everything is Brahman"**. The Silpa Vidya Rahasyopanishād states that the whole world is the beautiful version of Silpa. There is no difficulty in understanding the fact, that to view everything as the expression of silpa is the same as to view everything as the manifest form of the Supreme One. Silpa is Brahman or Vastu and Vaastu or Brahman is Silpa.

This beautiful text softens the heart and sharpens the mind. With the heart softened and the mind sharpened by the study of this upanishad, one is sure to feel the blissful touch of Silpa even in the gentle breeze that sweeps over the foliage and flowers.

I am greatly beholden to Vaastu Vijnani Dr.V.Ganapati Sthapati, in whom I feel the honoured and active presence of the legendary Mayan, for having induced me to render the English version of this beautiful text.

I request the contemporary Vedic scholars to be sincerely mindful of all the upanishads including the six listed above; to be faithful to the Vedic texts by incorporating the study of Āgamas and Vaastu Shāstras into their study-scheme.

- Dr.S.P.Sabharathnam

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॥ श्रीः ॥

अथ

शिल्पविद्यारहस्योपनिषत्प्रारंभः

ओं सह नाववतु । सह नौ भुनक्तु । सह
वीर्यं करवावहै। तेजस्विनावधीतमस्तु मा
विद्विषावहै। ओं शान्तिः शान्तिः शान्तिः ॥

SHILPA VIDYĀ RAHASYOPANISAD

(The scriptural text dealing with the subtle principles of the science of manifestation and forms.)

Invocation

OM!

May He protect us both (the teacher and the disciple); may He be pleased with us both; may we, the master and the student, work together with vigour; may our study make us supremely englightened; may there be no dislike or discordance between us OM! Let there be blissful peace at all the three levels of existence!

Note:-

This is a supreme kind of invocation, where both the teacher and the student pray for harmonious co-operation in the diligent and vigorous study of the scripture dealing with cosmic and spiritual sciences.

Even if a slight trace of disharmony and discordance prevails between the master and the aspirant, the entire process of instruction and study would become fruitless and futile. If the attentive mind of the student is perfectly tuned with that of the master, he could understand well even those matters that have not been explained orally. Most sacred and secret principles are revealed by the guru to the disciple only through the harmonious tuning of the mind. If the disciple keeps himself perfectly tuned to his guru's heart and mind, he need not wait for oral instructions. At this stage, every action of the guru would be imparting the essential message of the text to the disciple.

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"When I would sit for meditation, different lights would appear: the red light, the white light, the black light and finally the blue light. Then a golden saffron light would appear, and the guru would appear within that light. I would then receive instructions from him".

- Bala Muktananda
(from Bhagawan Nityanand of Ganeshpuri, P.91)

This sort of instruction is the one that occurs upon the perfect harmony between the guru and the disciple.

This invocation is meant for maintaining the mental and spiritual harmony between the master and the aspiring disciple.

"Sānti" is repeated three times categorically in order to keep ourselves in peaceful disposition at all the three levels - physical, subtle and casual. Absence of peace at any one of these levels would surely affect the other two levels and consequently spoil the attentive disposition.

1. **अथ शिल्पविद्यारहस्योपनिषदं व्याख्यास्यामः।**
Now, let us transmit, in an expositional process, the essential message of the 'Shilpa Vidyā Rahasyopanishad'.

2. **सकल निगमागमसारपारगं परिपक्व भावभरमाचार्यं प्रणम्य छात्रः परिपृच्छति।**
The disciple, with all the submissiveness, having prostrated himself at the feet of the Supreme Preceptor, who has perfectly mastered the essential sciences enshrined in all the Vedas and Āgamas, and who sustains himself by his own highly perfected wisdom and power of transmission, asks with a sense of inquisitiveness.

3. **भगवन् मे महाशिल्पतत्वरहस्यं ब्रूहीति।**
"O, my Lord of masterfulness, kindly impart to me the secret of the essential science related to the greatly honoured Shilpa - thus (he asked).

4. **तꣳ सहोवाच।**
The (favourably disposed) master spoke to him:

5. **अणोरणीयो महतो महीयोऽतो न वेदितुꣳ शिल्परहस्यꣳ शक्नोति।**
He, who does not know the exact meaning of the Vedic dictum "anoraniyān mahatomahiyān[1]" is

[1] Minutest point within the smallest object and the greatest boundary encompassing the greatest one.

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not capable of understanding the subtle principle of the science of Shilpa.

6. **भव तस्मात्सावधानः ।**
Therefore, be with a keen and attentive mind !

7. **वाङ्मनोगोचरातीतानन्तदिव्य तेजोमयो नित्यो निर्विकल्पो निरञ्जनो निराख्यातोऽतिशुद्धो देव एकः परब्रह्मा विराजते ।**
There, irradiatingly shines forth the supreme Primal Existence (Almighty), which is beyond all those comprehended by speech and mind, which is interminable, which is self-expressive, which is brimming with brilliancy, which is eternal, untouched by modifications, unstained, inexplicable, exceedingly pure, immortal and the undivided whole.

8. **जगदुदयकारणं तन्मनो जायते । मनस्सङ्कल्पात्सर्वं जगत्सङ्कल्पितं भवति ।**
The root cause for the emergence of entire world-system originates in his mind (i.e., his will, iccha). All the world-systems become harmoniously and systematically well-conceived, through the creative ideations of his mind.

9. **स एवाखिला-जाण्डकोटीनां मूलबीजं भवति ।**
It is that Supreme Almighty who, of his own spontaneous will, becomes the primal seed and source of the entire range of the manifold millions of the vast cosmic spheroids.

10. **तस्मान्नद्वितीयोऽस्ति कश्चित् स निराकारोऽपि साकारत्वं विधत्ते । निराकारसाकारावस्य नैसर्गिकौ वर्तेते ।**
Apart and as different from him, nothing exists. Even though he is formless, he assumes upon himself the state of being associated with form. The state of being formless and that of being associated with form - these two modes belong to him as his innate nature.

11. **तदेवैवं प्रारभ्यते जगच्छिल्पम् ।**
It is in this way, that the scientific and orderly creation of the world system gets commenced.

12. **य इमा विश्वा भुवनानि जुह्वदृषिर्होता निषसाद पितानः । स आशिषा द्रविणामेच्छमानः परमच्छदो वर आविवेश ।**
Verily, he is the performer, seer and progenitor, who performs the sacrifice of creation by offering the entire range of world-systems as oblation to the sacrifical fire. In

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this way he becomes engulfed by the spontaneous upsurge of desire to create the cosmic system.

13. **विश्वानि सृष्टयवनप्रलयरूपाणि कर्माणि यस्यासौ विश्वकर्मा भवति। यस्मिन्नद ँ सर्वे भुवनं जजान। यस्मादिद ँ समस्त ँ सङ्कल्परूप ँ शिल्पं प्रकल्प्यते।**

Because of these activities in the form of creation, protection and complete withdrawal of all the world systems, He becomes widely known as Viswakarma. In Him, all these world-systems got conceived in this way. He created the entire range of cosmic system full of visible and invisible forms. His mind, which is essentially of the form of creative ideations, orderly conceives the entire range of harmonious and perfect form (Shilpam).

14. **स विश्वकर्मा परमात्मा भवति। आदि शिल्पकृत्तत: स भवति।**

He, Viswakarma, the Designer and Creator of all, is indeed the Supreme Primal Existence. Therefore, he becomes known as the First and Foremost Designer of forms.

15. **मनसा यत्सृज्यते विश्वकृदस्तत्सर्व ँ शिल्पमेव भवति।**

Whichever is designed and created by the mind of All-doer, all of those creations become characteristically known as 'Shilpa'.

16. **यत्तद्विधानमनुब्रूहीति छात्रेन पृष्टो देशिकस्स पुनरुवाचेति।**

"Kindly instruct on the systematic process of that science of creation and form" - thus asked by the disciple, there occurs the expositional discourse of the Preceptor.

17. **यदा स परब्रह्मणस्सङ्कल्पोदयो भवति तदैवाहंकार: प्रजायते। तस्मात्पञ्च च भूतानि। भूतेभ्य ओषधयस्सर्वे। तेभ्योऽन्न तत: स्थावरजङ्गम: प्रपञ्चो भवति।**

When the mental ideation of the Supreme Primal Existence first arose, immediately then originated the principle known as individuation (ahamkārā). From individuation, otherwise known as separate "I - consciousness", five gross elements appeared. From the gross elements, medicinal herbs, plants and such other vegetations appeared; from these food got produced. From the food-essence arose all the world-systems comprising the mobiles and the immobiles.

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18. **कारणं भवत्यत्र चोपादान-माकाशादीनि।**
The elements such as space, air, fire etc., constitute the material field and this material field becomes the productive source for the emergence of all the worlds and worldly objects.

19. **अखण्डोऽपि दीव्यतेऽयमेव हृत्कोशेषु परिच्छिन्नजीवत्वेन व्याप्नोतिः चाकाशवत्सर्वम्।**
Inspite of absolutely being an impartite irradiating Existence, the Supreme Vastu dwells within the smallest heart-space of all beings, assuming the form of individualised self and pervades the entire range of worlds and existents, like the all-pervading space.

20. **अलंचकार नक्षत्रादिभिराकाशम् । शैलकाननद्रुमादिभिश्च वसुंधराम्।**
The space became decorated and beautified with stars and other luminous bodies. The Earth also became studded and decorated with mountains, forests, trees and so forth.

21. **नानार्थभाजं वाचँ शिल्पविचित्र सुन्दरामकरोत्। एवमेवालङ्कृतवान् पदार्थानि वै सर्वाणि । सर्वमेतद्भवति विश्वकृदः शिल्पम्।**
He created the words indicative of innumerably variegated objects in such a nice way that all those words became worthy of being viewed as 'Shilpas' associated with varieties of embellishments. Thus, indeed, all these objects became charmingly beautified with respective meanings. Therefore, all these worlds of speech **(sabda)** and of denoted things **(artha)** are essentially to be considered as 'Shilpa' created by Viswakarma.

22. **यदा तदाभवज्जगद्विज्ञानशून्यँ सोऽकामयतात्मानं पञ्चस्याम् । तदैवाविरासीत्प्रवृत्यै । तस्यैव तेजोऽशादभवन् ब्रह्माणो मनुर्मयस्त्वष्टा शिल्पी विश्वज्ञ इति पञ्च।**
When the created world-system became bereft of creative knowledge and skill, He, (Viswakarma) willed to make himself fivefold. For the sake of orderly function and perseverences of the world, He, immediately assumed an effulgent form. From his abounding effulgence, within a fraction of second, five Lords (Brahmans) appeared - Manu, Maya, Tvashta, Silpi and Visvajna.

23. **तानेवँ होवाच विश्वकर्ता । प्रवर्तयत लोकं पञ्चकर्मभिरिति । प्रवर्तत इत्येतेः पञ्चभिरिति प्रपञ्चो भवति।**
Then, Viswakarta, the Doer of All, instructed them: "Maintain

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perfectly this world-system through five functions pertaining to each one of you. Since the entire world system is nourished and maintained by five functions, the cosmic system becomes known as **'prapancha'**.

24. **यज्ञ ऐवेदं कर्म यज्ञः कर्मैव।**
This functional system is indeed sacrifice, in its real sense. Sacrifice is nothing but the activities related to the orderly function of the world-system.

25. **शृणुत तध्यथा सृष्टिस्थितिल-यतिरोधानानुग्रह रूपाणीति।**
Then, listen to the five cosmic functions in their appropriate perspective. Creation, sustenance, dissolution, obscuration and bestowal of blissful state - these are the five functions related to the cosmic realm.

26. **एतद्भवत्येवं विश्वकर्मणः कुर्यादिवमेव च लोकस्य।**
From Viswakarma, this system of cosmic function originated. The five manifestations of Viswakarma, Manu, Maya and others, perform these functions concerned with the world system.

27. **दातारो भवन्तु ज्ञानस्य विज्ञानस्य च शिल्पिनः। अधिष्ठाताहं कर्मणः सकलस्य यज्ञरूपः। विलसितमेवं मयैव जगच्छिल्पस्य कौशलम्।**
The Silpins become the revealers of truths and concepts related to worldly wisdom and the spirit-centered cosmic science. Being actualised and vitalised by me, these activities become fit enough to be considered as being associated with the significant features of yajna (sacrifice). In this way, it is by my, the Shilpa endowed with the dexterity and elegance related to the world system, becomes systematised and propagated.

28. **गुह्यमिदमाध्यात्मम्। रहस्यं भवति प्राणिनामज्ञेयम्। तदेतद्विवृणुत विवृणुत लोकस्य। प्रकल्पयत यज्ञँ शिल्पेन।**
This science of cosmic system, which is purely spirit-centered, is indeed subtle and kept beyond the reach of ignoble persons. This secret science remains unknowable to those who are unlettered and imperfect. Now, I explicate and expound this science for the benefit of the world.

29. **शिल्पेनैवेदमुपबृंहितम्। यज्ञो भवति लोकानां निश्रेयसे। सिध्येरन्विविधान्यपि कार्याणि। भवति च तन्नानाविधशिल्प बहुलम्।**

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This global field gets nourished and expanded only by the science of Shilpa. Yajna is performed systematically for the material and spiritual benefit of the world only by means of Shilpa. Multifarious activities get duly accomplished by means of Shilpa. The Shilpa becomes manifold due to various kinds of activities meant for the orderly maintenance of the world.

30. **शिल्पादृते किंचित्सत्रमिति नोच्यत इति । ततोऽवश्यं विसृजत विसृनतोपकरणानि ज्येष्ठाः अभ्यर्चनीयोऽहं यज्ञेनैव लोकस्य । तान्येवं वेदीकुण्डरथपात्रादीन्यभ्यूहयत । कारयताध्वरान् स्वर्वैरपि लोकैरनुश्रुतमिति । एकैकस्यैकैकोऽध्यक्ष इति वेदस्य ॥**

No sacrificial process is explained without the proper role of Shilpa. Therefore, let the elderly and highly skilled masters create all the tools and utensils needed for a sacrifice. This must essentially be done. I manifest in this world so as to be propitiated in a fitting way by yajna for the benefit of the world system. For the purpose of sacrifice, gain proficiency in creating Vedic altars, fire-pit, chariot, utensils, etc., needed for yajna. The sacrifices are to be performed even by oneself (if not through the appointed priests). Thus, it is repeatedly heard by the world, through Vedic injunctions. In that case, there should be sacrifice. This is the Vedic rule.

31. **तत्राथर्वणश्शिल्पभूयिष्टमत्यन्तम् । मन्त्रेणैव स्वरूपाणि प्रकर्तव्यानि। ध्यानेनैव पश्यन्ति तद्रूपम् । रूपेणैव ध्यायन्ते तद्वैवतम्। रूपमेव तच्छिल्पम् ।**

In this regard, the Atharvana Veda is exceedingly replete with abounding principles of Shilpa. Various forms needed for the welfare of oneself are to be designed only by mantras. That particular form is visualised by the skilled persons only through the technique of meditation. The abounding features and qualities of a deity are contemplated only through the relevant form. That form itself becomes Shilpa.

32. **तान्ययोदारुशिलाताम्रहिरण यविकाराणि । मृदादीन्यधमानि । यद्यस्योक्तं तद्विकारं तस्य ।**

The sculptural forms are the modified versions of iron, wood, stone, copper and gold. The sculptural forms made of earth and such other materials are considered to be of inferior variety. The sculptural form designed out of

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one particular material is considered to be the modified form of that material.

33. आयतनवन्ति वै सर्वाण्यपि दैवतानि । एवमेवापराण्यपि शिल्पविलसितानि कर्माणि । भवन्त्येतानि च मोक्षप्रदानि । संपश्येरण् सर्वकल्याणानि लोकाः ।

All the divinities, indeed, take hold of these forms and make them fit enough to be considered as their abodes. In this way, even other activities become illumined and purposeful by means of Shilpa. These forms and the related structures become capable of bestowing the supreme state of existence, dissociated from the grief-yielding factors. The worlds acquire prosperity and all-auspiciousness by means of Shilpa.

34. संचिनुयात्पुण्यमेभिः शिल्पैरिति । ब्राह्मणानामेतद्भवति शिल्पम् । यद्यब्राह्मणो भवेन्न शिल्पीति ।

By means of these harmonious activities pertaining to Shilpa, the world earns meritorious effects. Men become the knowers of Supreme Existence, only through Shilpa. If they do not become the knowers of Supreme Vastu, it is because they do not understand what is Shilpa.

35. अब्रवीदेवं पनुराचार्यः सर्वज्ञः । यदा यदावहीयते लोकादस्माद्धर्मं शिल्परूपं तदैवाविर्भूयते भगवान्विश्वकर्मा-त्मनस्तेजः प्रकल्प्याकारान् । तस्मादेव प्रजापत्यृषयः प्रजायन्ते शिल्पविभवः ।

Again, the Preceptor, who is the knower of all sciences, spoke, thus: "on each occasion when the harmonious factors thriving in the form of Shilpa are essentially to be put into their respective role to sustain the world system, instantaneously the Lord Viswakarma incarnates and designs the life-sustaining form from his own effulgence. It is from Him that Prajapati and other sages, who are well-known for their exalted position in the science of Shilpa, were borne.

36. तेभ्य एव पारंपर्यं समागतं भवति शैल्पिकमाचार्यत्वं च । देवानामप्याचार्यास्त एव विभ्राजन्ते महान्तः । निरुक्तास्ते भवन्त्यादिकर्तारो लोकप्रवर्तकाः ।

It was from them, the lineage of Shilpins came into existence and those who belong to this lineage are bestowed with the significant features and pre-requisites of a Shilpin and with authentic preceptorship. The high-souled great persons of this lineage shine

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forth as the spiritual masters even for the Devas. They become expressly proclaimed as the foremost leaders and masters endowed with the authority of directing the activities and as the sustainers of the harmonious world-system.

37. **तद्द्विविधमेव ँ शिल्पं दैवं मानुषं चेति। नाभानेदिष्ठादीन्यत्र प्रथमानि। अन्यानि मानुषाणीत्युच्यन्ते।**

The science of Shilpa becomes two fold as follows: 1)Divine and 2)human. Those which are at the centre and which are adjacent to the central region are considered as belonging to the first kind. (i.e., divine). All others are said to be human.

38. **देवमूर्तिदेवायतनेष्टयादिकं भवति सर्वं दैवमिति विचित्र ँ शिल्पम्। मानुषं चैवं भवति शस्त्र-अस्त्र-यन्त्र-हल प्रासाद वाप्या भरणादीनीति।**

Various kinds of proportionate creations such as the divine images, temple, sacrificial hall etc., belong to the **divine-Shilpa.** Tools and weapons which are held in hands, arrows and such other weapons which are thrown at, machines, plough, house, tank, ornaments etc., belong to the **human-Shilpa.**

39. **तयोरेव ँ शिल्पयोर्भवन्ति वागीश्वरी मेवादीन्युपकरणानि। एभ्यो दशभ्य एव क्रियते सर्वं वै विचित्र ँ शिल्पम्।**

For the sake of bringing into effect all these divine and human **Shilpas,** there are tools for the Shilpins such as scriptural text, chisel, etc. Even these tools are considered as the manifestations of Shilpa. Only from these ten forms of Shilpa (i.e., 3 for divine and 7 for the human), the entire range of structures and forms of variegated kinds get proportionately designed and created.

40. **अतः शिल्पमूलानि सर्वाणि। पूजानीयानि सर्वेषामतो भवन्ति यै शिल्पानि।**

Therefore, it remains to be well understood that all the worlds and worldly objects owe their origin to Shilpa. On this reasonable ground, it is maintained that all the existents and objects are of the form of Shilpa and they become worthy of reverence and worship.

41. **एभिः सुखं जीवेयुर्लोकाः। एभिराप्नुयान् निश्रोयसम्। एभिर्भवन्ति जगन्ति चक्षुष्मन्ति। एभिः पूज्यन्तेऽत्र वेधसः स्थपतयश्च। एभिः पूर्णं भवत्थानन्दं च। एभिर्मुमुक्षवः प्राप्नुवन्ति मोक्षम्।**

All the beings of the worlds live with happiness through the

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harmonious creations of Shilpa. They attain the perfect beatific state by these creations of Shilpa. They become endowed with **real eyes** through the creations of Shilpa. Only through the energising role of the creations of Shilpa, those devoted to the study of authentic scriptures and the Sthapatis are revered and worshipped. By the creations of Shilpa, there occurs perfect fulfilment and everlasting bliss. Those aspiring for liberation attain final beatitude only through the creations of Shilpa.

42. **इत्येवं भवति शिल्पम् । शिल्प ँ हास्मिन्नधिगम्यते। तस्माज्जगत्सर्जनं भवति शिल्पम्। यज्ञो भवतु शिल्पम्। शिल्पं वै भवतु यज्ञः। पुण्यं भवतु शिल्पम्। ज्ञानं भवतु विज्ञानं च शिल्पम्।**

Thus, the science of Shilpa becomes unique and supremely exalted. To all those who aspire for happiness of the world, this science of Shilpa becomes capable of effecting the orderly creation of world system. The systematic performance of yajna assumes the elegance of Shilpa. The orderly process of Shilpa itself, indeed, becomes that of yajna meant for the benefit of the world. Shilpa itself becomes the meritorious effect. Shilpa itself assumes the role of worldly knowledge and spiritual knowledge and the role of cosmic science.

43. **लौकिकं भवतु वैदिकं चापि शिल्पम्। ब्राह्मणानामेवेद ँ शिल्पं भवतु। तत्वं भवति शिल्पम्। रहस्यं भवति ि-शल्पम्। जगत्सर्व ँ शिल्पमेव भवति। तदेव विश्ववर्धकं भवत्वित्युपनिषत्॥**

All those activities related to the world and those related to the Vedic realm are the graceful expressions of Shilpa. Even the perfection that has blossomed within the heart of the knowers of Supreme Existence, is indeed an expression of Shilpa. Each and every relevant principle (truth) is the expression of Shilpa. Each and every subtle principle, carefully guarded from being distorted and misused, is the expression of Shilpa. The entire world-system is nothing but the harmonious expression of Shilpa. The Shilpa itself becomes the nourishing and sustaining source of the whole universe - thus ends the Upanishad.

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44. **ओं सह नाववतु । सह नौ भुनक्तु । सह वीर्यं करवावहै। तेजस्विनावधीतमस्तु मा विद्विषावहै। ओं शान्तिः शान्तिः शान्तिः ॥**

इति

याजुषाथर्वणशिल्पविद्यारहस्योपनिषत्समाप्तः ॥

OM! May He protect us both; may He be pleased with us both; may we, the master and the disciple, work together with vigour; may our study make us supremely enlightened; may there be no dislike between us. OM! Let there be blissful peace at all the three levels of existence.

- Here ends the Shilpa Vidyā Rahasyopanishad belonging to that point of Atharvana Veda which deals with science of creation of the universe.

(Please note that yajna or yaajusha, exactly means the science of creation of the universe. This meaning is justified by the study of the Āgamas, and the Upanishads).

Note : According to Mayan, the scientist and technologist of Bharat, MOOLAM is Parabrahma (Vishwa Brahman) and KAALAM is conscious principle - the creative element (Vishwakarman) otherwise designated as Kaalama Kadavul (காலமாக் கடவுள்). This name was offered by Mayan in his Aintiram and other treatises. In other words, Moolam (மூலம்) is Brahman that exists in vibrant stillness with no form (unconscious, unaroused अनाहत, nishkala, avyakta) and Kaalam is active Brahman (Kriya Brahman) that is, Sakala nishkala, vyaktā vyakta or morpho amorphic form, the primal manifest form. This leads to conclude that Shiva linga is the sakala nishkala bhava of Para Brahman, that is Vishwakarman. As stated at many a contest, the primal manifest form is Vaastu Purusha Mandala which is விங்கரு Vinkaru, foetus of akasa, the Space as discovered by Mayan. So, Siva linga, as stated in Vishwakarma Vaastu Shāstra, is Vishwarma-Shiva, also called Kaalam.

Hence, the creative artist, Mayan, is christined as Vishwakarman, by the great Veda Vyāsā in Mahābhārata and in the Vedic mantras, including Purusha Sūkta.

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VAASTU SŪTROPANISHAD

The Vaastu Sūtropanishad, ascribed to Pippa lada, the Rishi of the Prasnopanishad, is the text on image making - the essence of form in sacred art.

"Six subjects are dealt with in the six chapters, namely stones compositional drawings, carving, disposition of the parts of the image, the basic emotions connected with images and the total composition of the image panel.

The text deals with the basic symbolism of the compositional diagram, which is underlying any image or panel, the micro-macro cosmic correspondence in sacred images, the derivation of the original anthropomorphic image from the symbolic pillar of sacrifice and the application of aesthetic experience of **'rasa'** and **'bhava'** to image making. The metaphysical question of the origin of form and its importance for the attainment of spiritual realization or **'moksha'** is very central to the text.

The Upanishad throws light on the basic conceptions and practice underlying sacred art. It shows that the principles are not limited to Indian Art alone, they have a universal significance".

The above is the note offered by the authors of the commentary and translation of the Upanishad, namely Dr.Alice Boner and Ms.Bettina Baumer and Sri.Sadashiva Ratha Sarma of Puri, Orissa. They are not only great scholars, but also artists who have rendered inimitable services to the promotion of Indian culture. Sri.Sadashiva Ratha Sarma is a holder of the title of Padmasri, Dr.Bettina Baumer, is the Director of Research of the "Alice Boner Foundation for the Research on Fundamental principles in ancient Indian Art" at Varanasi. Alice Boner was a sculptor in Switzerland and France. She has edited a famous book 'Shilpa Prakasa' with illustrations. She was the holder of 'Padma Bhushan' award by Indian President.

The shilpis of India are very much indebted to those three eminent scholars who have, like Rishi Pippa lada, brought

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out such a fine volume impressing upon the scientific basis of image making. The commentaries are elevating and illuminating in a good number of ways.

It has to be pointed out here at this juncture as a Sthapati, practising in the field of traditional architecture and sculpture, that there are two important terminologies namely रेखाज्ञानं and वृत्तज्ञानं (rekha jñānam and vritta jñānam) used by Maharishi Pippalada while defining the term स्थापकः (Sthāpakaha). वृत्तज्ञानं च रेखाज्ञानं यः जानाति सः स्थापकः says Vaastu Sutropanishad. To those who doubt the great antiquity of the text, I would say that the use of those two terms. वृत्तज्ञानं, रेखाज्ञानं itself is enough to prove its remote antiquity of the texts to understand this a study of Āgamic science which is also as old as Vaastu Shāstra, is called for, by historians of Indian culture.

Architectural science is actually concerned with certain basic form-namely square, octagon and circle signifying the primal wave patterns of the micro as well as macro energies known to Indian culture by the terms Jeevātman and Paramātman respectively. As stressed many a time, in the foregoing discussions the patterns represent Satvic, Rajasic and Tamasic qualities of the primal and absolute energy (Vastu Brahman), which patterns came to be named as Nagara, Dravida and Vesara patterns in the technological treatises called Vaastu Shāstras.

Another fact of science stressed in the pages of 'Sthāpatya Veda' is that the 'Time' is the causal element of all visual and aural forms of reality. So, it must be clear now that a Sthāpaka is one who is versed in Time and Space (कालज्ञानं and पदज्ञानं) that are denoted by the most ancient terms - वृत्तज्ञानं and रेखाज्ञानं.

In the Vaastu treatises वृत्तज्ञानं is implied in the chapter on 'units of measurements' identified by me as time units analogous to the table of musical vibrations and the रेखाज्ञानं in the chapter on 'Pada Vinyāsa' पदविन्यास or Vaastu Purusha Mandala वास्तु पुरुष मण्डल, where the meaning of the रेखाs or linear forms and dealt with, if not so openly as I have treated in the pages of 'Sthāpatya Veda'. Corresponding to रेखाज्ञः, we have चित्रज्ञः and to वृत्तज्ञः we have गणितज्ञः. This is supported by Mayan who says that காலக்கூறே கணக்கியலாகி (Kaalakkurey kanakki- yalahi) meaning that Mathematics is rooted in Time-units. Mayan deserves several tons of praise for this discovery.

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FIRST CHAPTER

1. वास्तोष्पतिर्ज्ञेय इति ।
(They) should know Vastospati (the divinity of Vaastu).

2. षट्शिल्पाङ्गप्रयोगेण प्रजनयन्ति रूपाणि ।
Art-forms are produced by means of six disciplines.

3. यूपमिदं ज्योतिः ।
The Yupa (sacrificial post) is this light.

4. वृत्तज्ञानं रेखाज्ञानं च यो जानाति स स्थापकः ।
Who has the knowledge of circle and line is a sthāpaka.

5. शिल्पात् प्रतिमा जायन्ते ।
By Silpa images are produced.

6. स प्रवहणः शिल्पसूत्राध्यायं स्थापकविद्यां चावदत् ।
He, the carrier of the tradition, proclaimed (to them) the teaching of the Silpasūtra (called) the Sthāpakavidyā.

7. शरीरमूर्तिरहिते मन आवेश्य विशेषेण विकल्पिदोषयुक्तं भवति इति ।
When worship is done without bodily images, the mind becomes particularly vitiated by indiscriminate imagination.

8. वास्तुषडङ्गमिति श्रेष्ठम् ।
Six disciplines of Art are essential.

9. षड्धा शैलं ज्ञेयम् ।
Six kinds of stones are to be known.

10. शैलादङ्गरागज्ञानं प्रसरति ।
By the type of the stone the colour (raaga) of the image is known.

SECOND CHAPTER

1. निर्दिष्टार्थकप्रतिमा ग्राह्या ।
An image should be envisaged to express a specified meaning.

2. तत्पातनं प्रथमा क्रिया ।
Setting the stone is the first action.

3. तन्मर्दनं द्वितीया क्रिया ।
Polishing it is the second action.

4. विलमिति मर्मज्ञेयम् ।
This hole is considered as the central point (marma = core).

5. न कृत्यरूपार्थ रेखाकरणं कर्तव्यम् ।
For Krtya-images (clay figures) a line diagram need not be made.

6. आदौ वृत्तम् ।
First a circle (is made).

7. एकैकस्य संयोगे एकीभवति ।
By the connection of one with one a unity is formed.

8. रेखान्वये सवङ्गाणि न्यासय ।
All limbs have to be set along the lines.

9. तेजांसि सरलरेखाणि ।
Straight lines are as rays of light.

10. नाभौ रूपकर्म प्रारभ्यते ।
The creation of the image starts from the navel.

11. प्राजापत्यरीत्या वृत्तं हि तेजस्तदाऽपां भासे

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चतुरस्त्रम ।

Following the order of Prajāpati the circle represents light (tejas) while the square indicates water.

12. कर्णद्वयं मरुद्भावेन प्राचरन्ति ।

Two diagonals are drawn in the nature of wind.

13. धरेव कर्णिकक्षेत्रमाकर्षयन्ति स्थापकाः ।

The Sthāpakas trace the karnikaksetra (rhombus) as the earth.

14. तत्र मध्ये लब्धबिन्दू रसायाः प्राणः ।

The bindu obtained in the centre is the life-breath of the earth.

15. त्रिहुताग्निः स्मर्यतेऽपि च लोके ।

Fire in the form of a triangle is known even in the (non-Vedic) world.

16. निम्नगास्त्रिहुता आप इति ।।

The inverted triangle is water.

17. षट्कोणको हि आकर्षनीविद्याविशेषः ।

The hexagram is the special science of attraction.

18. यथा रूपे तथा यूपेऽनुच्छेदान्ता ग्राह्याः ।

As for images thus for Yupas cutting along the line-divisions should be done.

19. खननप्रकारो ध्येयः ।

Observe the practice (method) of carving.

20. सूत्रायने रेखाः सुभगा भवन्ति ।

Lines following the Sūtra become harmonious.

21. उत्थितरेखा अग्निरूपाः पार्श्वगा अवूरूपाः तिर्यग्रेखा मरुतरूपा इति ।

Vertical lines have the nature of fire, horizontal lines have the nature of water, diagonal lines have the nature of wind (maruta).

22. रूपसौभाग्याद् ध्यानभावो जायते ।

By a harmonious form a meditative mood is induced.

23. प्रग्निरेखायामुत्तुङ्गरूपाणि जायन्ते ।

On the fire (vertical) lines upright forms are produced.

24. अवूरेखायामुत्सुकरूपाणि जायन्ते ।

On the water (horizontal) lines forms expressing longing are produced.

25. मारुतरेखायां तैजसरूपाणि ।

On the diagonal (wind) lines fiery (energetic) forms are produced.

26. रेखाज्ञानं सर्वमिति ज्ञेयम् ।

The knowledge of the line is to be known as all-comprehensive.

THIRD CHAPTER

1. रूपस्य भावो मुख्यः ।

The character (bhāva) of the form is essential.

2. भावानुसारतो रेखाविधानमिति ज्ञेयम् ।

The lay-out of the lines has to be established according to the character (of the image).

3. तेषां बहुधा कृत्यं श्रेयः ।

For these (artists) many work processes are important.

4. न्यासार्थं कालबोधो ध्येय इति ।

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One should observe the proper time for setting the stone (nyāsa).

5. **खनित्राणि अभिमन्त्रयेत् ।**

The chisels must be consecrated with a mantra.

6. **खनित्रपञ्चकं श्रेष्ठम् ।**

Five type of chisels are the best.

7. **रूपप्रकर्षार्थं रूपाङ्गं स्निग्धमिति ।**

The limbs of the images should be smooth to bring out a clear form.

8. **शिल्पकाराः प्रलेपयन्ति द्रावकरसम् ।**

The silpakāras apply a softening mixture.

9. **एषा हेतिविद्या श्रेष्ठा ।**

This is their best method of (using) the instruments.

10. **रक्षार्थं पर्णमणिः परिधेयः ।**

For protection parnamani should be worn (in an amulet).

11. **भेदनादङ् गसौभगं प्रभवति ।**

Perfection of limbs is achieved by carving.

12. **रेखानुपातेनाङ् गानि निधेयानीति श्रेष्ठकृत्यम् ।**

Placing the limbs along the compositional lines is the best method (action).

13. **गाथानुप्रासे लक्षणं व्यक्तं भवति ।**

In the sacred songs the features (of the gods) are revealed.

14. **ध्यानप्रयोगे रूपसौष्ठवं स्पष्टं भवति ।**

The excellence of form becomes clear in the act of meditation (by applying the dhyāna of the divinity).

15. **यथा प्रकृतिस्तथा रूपलक्षणम् ।**

The features of images conform to nature.

16. **अङ्गानामर्धाकलं सुषमं ध्येयम् ।।**

Figures in half relief are considered suitable (for the wall).

17. **हर्सावधि उभयदिशि चोर्ध्वे वर्धयेत् ।**

Figures in half relief should extend to the border-line on both sides and above.

18. **रक्षाविधानेन विघ्नघातयः ।**

Obstacles are removed by the protective covering.

19. **रेखाक्रमेण भेदनं चतुर्धा ज्ञेयम् ।**

There are four known ways of carving (the limbs) along the lines.

20. **नेम्योत्तरे रूपाङ्गं न वर्धयेत् ।**

No limb of the image should exceed the circle.

21. **खनित्रचालनविधिर्ध्येयविशेषः ।**

The method of handling the chisels should be studied particularly.

FOURTH CHAPTER

1. **प्रतीतात्प्रतीकः ।**

From the realization comes the symbol.

2. **रूपादङ्गानि सञ्जायन्ते ।**

From the form (of the symbol) arise the limbs (of images).

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3. द्विधातो ब्रह्म रूपवद् भवति ।

On account of having two aspects Brahman acquires form.

4. तत्त्वज्ञानेन कोष्ठका मुख्याः ।

According to the knowledge of the principles, for making images a grid is most important.

5. वर्गीकरणं मुख्यकृत्यम् ।

Making squares is the principal work.

6. कोष्ठकान्तराले रूपस्यावयवो ध्येयः ।

One should imagine the various parts of the image within the grid.

7. परिमिताङ्गहाराद् भावलक्षणानि जायन्ते ।

The features of the character (bhāva) arise from the measured gestures of the body (or limbs).

8. कोष्ठके व्यतिक्रान्ते रूपमविद्यं भवति ।

By transgressing the grid the image becomes faulty.

9. शुल्वयज्ञस्य साधनं शिल्परूपस्य साधनमिति ।

Sulva is the discipline for sacrifice, Silpa is the discipline for form creation (image-making).

10. शिल्पकाराणां रूपशैले रूपशालादि ध्येयम् ।

The silpakāras make image-halls in the rock and such things.

11. यूपाद्रूपं रूपाद्यूप इति स्वभावः ।

From the Yupa comes the (human) form, from the (human) form comes the Yupa, that is their (common) fundamental nature.

12. यूपस्य मानं ध्येयम् ।

Study the measurement of the Yupa.

13. षड्भागस्य प्रयोगो ध्येयः ।

The function of six parts should be understood.

14. पुरुषस्यतद्रूपेऽङ्गस्तम्भाश्चत्वारोऽष्टाङ्गक्रमेणोपजायन्ते ।

The four parts of the pillar become eight parts in the form (image) of the Purusa, in their respective order.

15. पालाशदण्डरज्जुसंयोगे रेखामानय ।

Draw the lines with a measuring rod of pālāsa wood and a rope.

16. निम्नादुर्ध्वाविधि सदारेखादीनाचर ।।

Lines and other (forms) are always to be traced from below upwards.

17. पुरुषस्तम्भ इव स्तम्भो वै यज्ञस्य रूपम् ।

The Purusa is like the pillar (of the universe), the pillar is the very symbol of sacrifice.

18. यथास्तम्भस्य यूपस्य दशाङ्गं तथा पुरुषस्य दशयज्ञप्रज्ञाश्च ।

As there are ten parts in the pillar and in the Yupa, thus the Purusa is understood as consisting of ten sacrifices.

19. स्थापकाचार्याः स्तम्भाद् रूपं बोधयन्ति ।

The masters of art understand the (human) image as derived from the pillar.

20. स्तम्भः कामकामिनस्त्रिधामानयन्ति ।

Those who have desires set up pillars of three types.

21. दैवयज्ञार्थं यूपः ।

A Yupa is set up for sacrifices to the gods.

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22. तदा पितृमेधेन वृषस्तम्भं पशुमेधार्थं मिथुनस्तम्भं कामचारा होमे रोपयन्ति।

Those who want to fulfill desires set up bull-pillars (vrsa-stambha) for ancestor-worship and mithuna sthambhas for animal-sacrifices in homa-ceremonies.

23. तद्वाधे मानुषा रूपज्ञा भवन्ति।

By knowing this, men become knowers of Form.

24. पुरुषस्य रूपाकले कोष्ठकस्याधो भावरूपं प्रसरति।

In the complete figure of the Purusa (human body) the form expressing its character (bhāvarupa) arises from the lower compartments of the grid.

25. दशाङ्गयूपे रूपे इति तस्य भावः समानः।

The significance of the ten sections is the same in both the Yupa and the human form (image).

26. ब्रह्मकीलाधारः ब्रह्मकीलेन सह क्षेत्रं विभाजय।

The middle-line (brahmakila) is the support, and the field (panel) should be divided by this middle line.

27. अङ्गादङ्गं सञ्जायते।

From one limb arises the other limb.

28. रेखासंयोगे तत्क्षेत्रेऽङ्गानि सौभगानि भवन्ति।

When the limbs in that panel adhere to the lines they become well proportioned (harmonious).

29. क्षेत्रनेमिं रोधयेदिति रेखचत्वरे च।

One should establish the circle of the panel in the field made by four lines.

FIFTH CHAPTER

1. भावस्यारोपणं रूपकर्मणि विधेयम्।

In image-making the infusion of feeling (bhāva) (into the image) is enjoined.

2. भावस्याऽधारो रसः।

The support of the emotional attitude (bhāva) (of the image) is rasa.

3. मनसि वृतिर्बहुधा प्रजायते तदा भिन्नरसाद्रूपं नैकं भवति।

Many fluctuations arise in the mind, by their different forms assume many types.

4. नवधा रसः।

There are nine rasas.

5. प्रथमरसः शृङ्गारः।

The first rasa is love (srngāra).

6. शृङ्गाररूपार्थमवरेखा ग्राह्याः।

For love-images horizontal lines should be used.

7. स हासो द्वितीयरसः।

Laughter (hāsa) is the second rasa.

8. मुखलक्षणाद् रसं जानन्ति सर्वे ईक्षणेन।

By seeing the features of the face all people can know the rasa.

9. स तृतीयः करुणरसभाव इति।

Sorrow (compassion, karuna) is the third rasa or sentiment.

10. रौद्रः शिल्पकारेषु चतुर्थो रसः।

For silpakāras anger (raudra, the

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furious mood) is the fourth rasa.

11. तिर्यग्रेखायां भावः प्रकटो भवतीति विशेषः ।

This sentiment becomes evident in the oblique lines, this is the particularity.

12. स वीरभावः पञ्चमः ।

The heroic sentiment (virabhāva) is the fifth (rasa).

13. वैरभावे उत्कटे भयङ्करो भवति स विलक्षणः षष्ठरसः ।

When the heroic sentiment becomes excessive it becomes terrifying (bhayankara), this is the sixth rasa which is different (from vira).

14. तस्याङ्गमारुतरेखायामिति स सप्तमः ।

(When) their limbs are on diagonal lines this is the seventh sentiment (bibhatsa, disgust).

15. शान्तभावः सोऽष्टमो रसः ।

The sentiment of peace is the eighth rasa.

16. भावानुगतरूपाणि चतुर्धा मुख्यानि ।।

In conformity with the sentiment images are of four main types.

17. लोके भाववोधस्य हेतुर्मनः ।

In this world mind is the cause of experiencing sentiments.

18. मनुष्याणां वृत्तिर्मुख्येति ।

Of humans it is the mental modification (vrtti) which is important.

19. सङ्कल्पाद् विकल्प इति विशेषः ।

The intention to worship (sankalpa) is the cause for the imagination (vikalpa), (of the particular form of God in which he is worshipped).

20. एष भुवनकोषो देहानुभूत्या क्रमः ।

This arrangement of the (fourteen) worlds (stages) constitutes the order of bodily realization.

21. अरूपाद् रूपं तस्य फलम् ।

From the formless arises form, that is the result (of the fourteen stages).

22. दिशानुसृते दिशापालानुपासन्ते ।

According to space-directions the guardians of the quarters are worshipped.

23. एवं दैवभेदान् मार्गभेदा जायन्ते ।

Thus from different divinities arise different ways (traditions).

SIXTH CHAPTER

1. न्यासधरणा श्रेष्ठा ।

The conception of the composition (nyāsadhāranā) is most essential.

2. वृत्त्या दैवचिन्तने भेदः सञ्जायते ।

According to the (differences of) mental modification (vrtti) a difference arises in the conception of divinities.

3. लक्षणप्रकाशार्थं शिल्पविद्या ।

The science of Silpa is to make manifest the (divine) attributes.

4. न्यासोऽलङ्कारमुद्रायुधवाध्रकक्षवाहनोपदेवारिस्तुवकक्रमेण रूपनवाङ्गविशेषो ध्येयः ।

One should remember the nine

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different elements constituting images in their order : composition, ornamentation, gestures, weapons, postures, vehicles, secondary divinities, and devotees.

5. **तिस्त्रः रेखाः श्रेष्ठाः ।**
Three (types of) lines are essential.

6. **रूपक्षेत्रे कोष्ठकालिर्मुख्या ।**
The sequence of lines of the grid on the stone panel is most important.

7. **षोडशकोष्ठकमध्ये रूपाणि प्रभवन्ति तद् रूपार्थं श्रेष्ठम् ।**
The forms appear within the grid of sixteen compartments, this is best for making images.

8. **विलमिति मर्म ब्रह्मेव निधेयम् ।**
The hole is the centre (marma), (it is to be) considered as Brahman.

9. **षोडशकोष्ठकप्रमाणविभागस्तु ब्रह्मदैव जैवोपदैवयाजकक्रमेण पञ्चधाध्येयः ।**
The compartments in the measure of the sixteenfold grid are known to be of five types : the field of Brahman, of the gods (daiva), of living beings (jaiva), of secondary divinities (upadaiva) and of worshippers.

10. **रूपाङ्ग चतुर्धेति विशेषः ।**
There are four parts in the figure, this is the particularity.

11. **विन्दुब्रह्मेव ब्रह्मध्रुवम् ।**
The bindu is like Brahman, Brahman is immovable.

12. **ब्रह्म सत्यादौ ।**
Brahman and satya are in the beginning.

13. **ब्रह्मविन्द्ववलम्बनेन रूपाङ्गाणि सौभगानि भवन्ति ।**
When the limbs of the image are depending on the brahmabindu (central point) they become harmonious.

14. **प्रलङ्करणं दैवभूषणमिति ।**
Ornamentation means the decoration of divine images.

15. **प्रमोदाद्रतिः प्रसरति ।**
From pleasure (in the image) arises love.

16. **करमुद्रा रूपस्य भावं ज्ञापयति ।।**
Hand gestures manifest the emotional attitude of the image.

17. **बाध्रं बलं ज्ञापयति रूपे ।**
The bādhra (weapons) communicate the power of the figure.

18. **आसनं षड्धा ज्ञेयम् ।**
Six types of postures (āsana) should be known.

19. **गुणानुसृतं रूपत्रयम् ।**
According to the quality (guna) there are three types of images.

20. **वाहनं रूपस्य प्रकृतिज्ञापकविशेषः ।**
The vehicle is a special means for revealing the nature of the figure.

21. **उपदैवतं प्रतिरूपमिति ।**
Attendant divinities are secondary figures.

22. **उपदैवताद् रूपज्ञानं प्रसरति ।**
The (aspects of the) main image are known by the attendant divinities.

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23. **अरिसन्धा ध्येया ।**

The connection (of the main figure) with adversaries should be remembered.

24. **रूपधाराया वृत्तिरिति श्रेष्ठा ।**

From the sequence of forms comes the condition (of the mind) this (procedure) is the best.

25. **स्तोतृणां रूपे सुभगविशेषः ।**

Through the (representation of the) signers of praises images become particularly beautiful.

26. **प्रज्ञार्थमेतद् वास्तूपाख्यानम् ।**

This exposition of Art (vaastu) is for the purpose of conferring knowledge.

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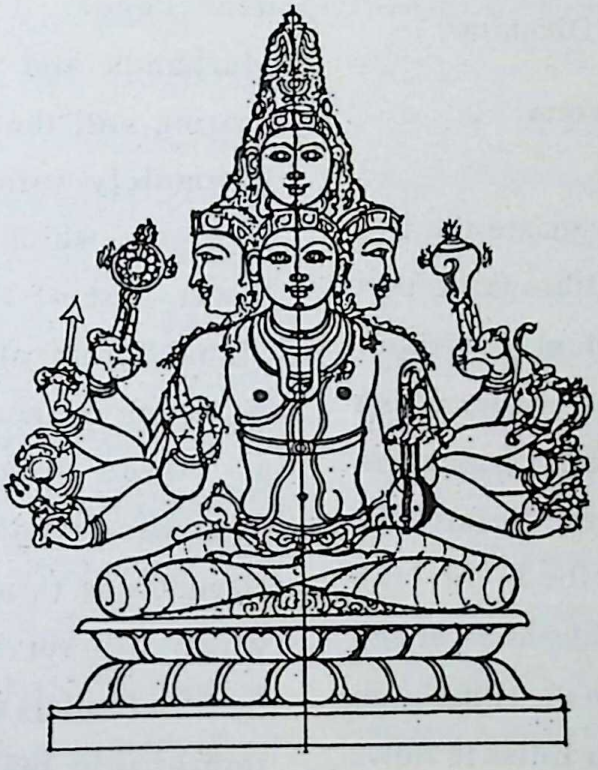
VIŚVAKARMŌ UPANISHAD

(Yājuśātharvaṇa Saṁhita)



Brahmavarta (I) - (C) a kingdom; the land of Parikshit where dharma and satya were practised and Yajnas were performed; the residence of Svayambhuva Manu, to which he returned after the marriage of his daughter; the land of Manu as also of Prthu; the place where the river sarasvati flows Eastward; visited by Rishabha. Bha.1.10.34, 1b.1.17 33, 1b 111, 21 25, 22, 26 1b 1V 19, 1 1b V, 4, 19, 5.28. Brahmavarta (II) a son of Rishabha and Jayanti. Bha.V.4.10. Brahmavarta (III) a tirtha sacred to pitrus near Dharatirtha on the Narmada; here Brahma resides always, M.22, 69,

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190, 7-8, 131, 70.

The Purana Index: V.R.Rama Chandra Dikshitar vol.II p.518. **Aryavarta:** 25 of Ikshvakus sons were ruled over this teritory given to Upadrashtha by Porushurama. Bha.IX, 6, 5, 16, 22. The Purana Index vol.I, by V.R.Rama Chandra Dikshitar.

The Desert River - system:

Sarasvati:

This and Drshadvati are the two historical rivers of Uttarapatha that flows down independently without belonging to the Indus group. Manu locates the region of Brahmavarta between these two sacred streams. The Sarasvati is described in the Milindapanha as a Himalayan river and its source is traceable to the Himalayan range above the Simha hills. It flows southwards through the Simla and Sirmur states forming a bulge. It flows down the past of Patiala to lose itself in the northern part of the desert of Rujaputana at some distance from Sirsa. Manu applies the name of Vinasana to the place where it disappears from view. In the Siddhanta Siromani (Goladhyaya, Bhuvana kosha), the Saraswati is correctly described as a river, which is visible in one place and invisible in another, (Drisyadrsya cha bhavati tatra tatra Sarasvati). It disappears for a time in the sand near the village of Cholaur and reappears again at Bara Khera; at Urnai near Pehoa, it is joined by the Markanda and the united stream bearing still the name of Sarasvati. Ultimately joins the Ghaggar or Gharghar which was evidently the lower part of the Saraswati. The Mahabharata also says that after disappearing, the river reappears again at three places, namely at Chamasodbheda, Sirodbheda and Nagodbheda. (Vanaparva 8). This river, which still survives, flows between Satadru (Sutlej) and Yamuna. It is not improbable that the Sarasvati, as known to the Vedic Aryans, was a mighty river, which flowed into the sea. (Max Mullar Rig-Veda-Samhita p.46).

Drshadvati:

Nearer the Yamuna is the sacred river called Drshadvati of which the origin may be traced to the hills of Sirmur. Upto Naham it has a westerly

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course, after which its course changes towards South and lies through the district of Ambala and Shahabad. It tends to meet the Sarasvati at Sirsa, the place below which both the streams disappear. The town of Pehoa (8km to Prthudaka) is situated on the Drshadvati. According to Manu (II.17), this river formed the eastern and southern boundary of Brahmavarta, while its western boundary was the Sarasvati. In the Mahabharata, (Vanaparva) the confluence of Drshadvati and the Kousiki is regarded as of peculiar sanctity. The Vamana purana (34), on the other hand takes the Kousiki to be a branch of the Drshadvati which is identified by Cunnigham with the modern Rakshi that flows by the south-west of Thanesvar, by Elphinstone and Todd with the Ghagar flowing through Ambola and Sind, and by Rapson with the Citrang, Chantang or Citang running parallel to the Sarasvati. (Bimala Churu law: Rivers of India p.16).

The river Sarasvati is said to have been a mighter river than even the Indus in the Vedic and pre-vedic times. Stein (1942) refers to the fact in atleast three passages in the Rig Veda, the oldest surviving record in any Indo-European language, a river course has been mentioned which corresponds to the present Sarsuti (Sarasvati) and Ghaggar. Nadisuhta the famous hymn, describes the Sarasvati as flowing between the Yamuna in the east and the Satudri (Satluj) in the west. Since none of the present rivers obviously fits, in with this description, the appellation Lost Sarasvati has been applied to this once mighty historical river. The lost Sarasvati: S.P.Gupta p.172.

The Pelaeo environmental change in north - western sub-continent have been caused by climatic, tectonic and anthopogenic factors. Tectonic factors assumed such overwhelming importance only because the major channels like those of Sarasvati were structurally controlled by enechelon faults. It was because of this reason that even relatively minor tectonic movements caused consideration of the archaeological sites was also determined by the vagrancy of these rivers. During the period 4-5 milennia

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B.P. north - western Rajasthan was a much greater place with the Sarasvati flowing through it. Some of the present rivers joined to make the Sarasvati a mighty river which probably discharged into the sea (Rann of Kutch) through the Nara, without joining the Indus. Yashpal, Baldev Sahai, R.K.Sood & D.P.Agarwal I.S. Civilization pp.172.

VISVAKARMOPANISHAD

This upanishad belongs to Yajushatharvana Veda. The supreme deity for this upanishad is Virat Visvakarman. The metres employed are Anushtup etc., could be ascertained by counting the syllables.

The central theme of this upanishad is to reavel the Supreme power the god of his creation of the entire universe, regulation and destruction for the welfare of this universe.

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॥ श्रीः ॥

अथ

विश्वकर्मोऽपनिषत्

ओं सह नाववतु । सह नौ भुनक्तु । सह वीर्यं करवावहै। तेजस्विनावधीतमस्तु मा विद्विषावहै। ओं शान्तिः शान्तिः शान्तिः ॥

आकूत्यै मनुब्रह्मणो महिमाद्वसुश्रवसि कर्तासि कर्त्ये पृथिर्मिहिमानाद्विश्वकर्मा विश्व रूपाव्दहुरूपा वसुरन्विश्वकर्मा । त्वष्टाह वै विश्वकर्मणो वै कामाय प्रजासृजेति॥ विश्वकर्मात्प्राणो जायते । मनस्सर्वेन्द्रियाणि च । खं वायुर्ज्योतिरापः पृथिवी विश्वस्य धारिणि । विश्वकर्माव्द्रम्हा जायते । विश्वकर्माद्विष्णुर्ज्जायते । विश्वकर्माद्रुद्रो जायते । विश्वकर्मादिन्द्रो जायते । विश्वकर्मात्प्रजापतिर्जायते । (विश्वकर्मात्पजापतयः प्रजायन्ते) । विश्वकर्मा द्वादशादित्याः । विश्वकर्माद्वसवस्संवत्सराणि छुन्दागुम्सि । विश्वकर्मादेवाः समुत्पद्यन्ते । विश्वकर्मणा प्रवर्ध्दन्ते । विश्वकर्मा प्रलीयन्ते । ॐ अथ (नित्यो) रुद्रो विश्वकर्मणः । ब्रह्मा विश्वकर्मणः । विष्णुश्च विश्वकर्मणः । शिवश्च विश्वकर्माणः । शक्रश्च विश्वकर्माणः । द्यावापृथिवी च विश्वकर्माणः । कालश्च विश्वकर्मणः । दिशश्च विश्वकर्माणः । आदित्यश्च विश्वकर्मणः । विश्वकर्मणायेवेदगं सर्वम् । अग्निश्च विश्वकर्मणः । ऊर्ध्वश्च विश्वकर्मणः । अधश्च विश्वकर्मणः । अन्तर्वहिश्च विश्वकर्मणः । विश्वकर्मणायेवेदगंसर्वं यद्भूतं यच्च भव्यम् । निष्कलंको निरंजनो निर्विकल्पः निराकृतिः । शुद्धो देवैको विश्वकर्मणो न द्वितीयोऽस्ति कश्चित् । य एवं वेद। स विश्वकर्मा भवति स विश्वकर्मा भवति । ओमित्यग्रे व्याहरेत् । नम इति पश्चात् । विश्वकर्मायेत्यु परिष्टात् । ओमित्येकाक्षरम् । नम इति द्वे अक्षरे । विश्वकर्मायेति पञ्चाक्षराणि । ॐ विश्वकर्मेति षडक्षरम् । ॐ नमो विश्वकर्मेति अष्टाक्षरं प्रदमध्येति । योह वै विश्वकर्मणा षष्टाक्षरं पदमध्येति । अनुपब्रुवे सर्वमायुरेति । विन्दते प्रजाः रायस्पोषं गोपत्यं । ततोऽमृतत्वमश्नुत इति । (ततोऽमृतत्व मश्नुते ततोऽमृतत्व मश्नुत इति । य एवं वेद ।)

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प्रत्यगानन्दं ब्रह्मपुरुषं प्रणवस्वरूपम्। अकार उकार मकार इति। (तानेकधा समभरतदेतदोमिति।) तानेकधाससुमुपद्यन्ते। तदेतदोमिति। ॐ पख्रह्मैको विश्वकर्मो न द्वितीयः॥ (य एवं वेद।) इत्युपनिषत्॥

अमूमिति नाम गृह्णाति। भद्रमेवसांकर्म विष्करोति। सा विश्वायुः सा विश्वव्यचा सा विश्वकर्मा। संपृच्छध्वमृतावरिरूर्मिणीः। (अधिक पाठः।) कंसयो मध्ये दृश्यते। विश्वकर्मेत्याह। अंतरिक्षं विश्वव्यचाः। असौ विश्वकर्मा। इमानै वैताभिर्लोकान्यथा। पूर्वं दुहे। अथो यथा प्रदास्ते। पुण्यमाशास्ते। एवमेवैव एकदुपस्तौति। कस्मात्प्रदादित्यं नियवंदमानाः। उपस्तुवन्तः पशून् महंति वृहदुग्धींद्राय देवेभ्यो वाचं विसृजते। ऋचा प्राचीमहति ऋगुच्यते। दक्षिणामाहुर्यजुषामपारां अथर्वणा आंगीरसां प्रचेसारम्नाचीमुदी महति ऋगुच्यते। ऋग्भिः पूर्वान्हेदिवि देवाईयते। यजुर्वेदे तिष्टति मध्ये अह्नः। सामवेदेनास्तमयेनुमीयते। वैदैरशून्यः त्रिभिरेतिशून्यः। ऋग्भ्यो जातं वैश्यं पर्नमाहुः। यजुर्वेदं क्षत्रियस्याहुर्योनीम्। सामवेदो ब्राह्मणानां प्रसूतिः। पूर्वेपूज्वभ्यो वचयेतदूचुः। आदरुचमग्निंचिन्वानः। पूर्वे विश्वस्य गृचोऽयोमृताः। शतंवर्ष सहस्रास्तत्रमासतातप आसीर्गृहपतिः। त्वष्टावो रूपैरुपरिष्टादुपदधताम्। विश्वकर्माव आदित्यैरुत्तरत उपदधताम्। प्रचेतावोरुद्रैः पश्यादुपदधताम्। संज्ञानं नः पश्चादिति। आदित्यः सर्वोग्निः पृथिव्याम्। वायुरंतरिक्षे। सूर्योदिवि। चन्दमादिक्षु। नक्षत्राणि स्वर्लोके। एवाह्येव। एवाह्यग्ने। एवाहि वायो। एवाहींद्रः। एवाहिपूषन्। एवाहि देवाः। प्रतेमहिर्मनुर्महि। एषासां अजयोर्दिवानो यथामयश्शर्महानरुहम्। मयविष्णुर्मरुद्भृधे। मयज्योतिर्ज्योतिषां देवो देवेषु परमेव्योमन्। ज्योतिर्ज्योतिरहं नशासा अक्षियन्नु-योर्मातस्मापितरः प्रदेवमयाते। तस्मादेवा पोज्योतिरहं मयेन मनसस्य धीराः॥

ओं सह नाववतु। सह नौ भुनक्तु। सह वीर्यं करवावहै। तेजस्विनावधीतमस्तु मा विद्विषावहै। ओं शान्तिः शान्तिः शान्तिः॥

Note:- Underlined word/words, sentences are in vougue in Mahamahopadhyaya Vedabrahmarishi. Traditional pandits like Sastra-panchocha Banolauravadi Nagalingaswamiji.

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आर्य्यावर्त्तः = विन्ध्यहिमाचलयोर्मध्यदेशः पुण्यभूमि (आर्य्यावत्तः पुण्य भूमिः मध्यं विन्ध्यहिमालयोः) अमरकोशः ॥

आसमुद्रात्तु वै पुर्व्वादासमुद्रात्तु पश्चिमात् । तयोरेवान्तरं गिर्य्यारार्य्या वर्त्तं विदुर्बुधाः ॥ इति मनवे २ । २२ ॥ शब्दकल्पद्रुमः Ikanda 190 ब्रह्मावर्त्तः (पुं) (ब्रह्मणां ब्रह्मनिष्ट ब्राह्मणानामावर्त्त इव । बहुलब्राह्मणाश्रयत्वादस्य तथात्वम् ।) देश विशेषः सरस्वती द्दशद्धत्यो र्देवनद्योर्यदन्तरम् । तद् देवनिर्म्मितं देशं ब्रह्मावर्त्तं प्रचक्षते । तस्मिन् देशे य आचारः पारम्पर्य्यक्रमागतः । वर्णानां सान्तरालानां स सदाचार उच्यते । कुरुक्षेत्रञ्च मतस्याच्च पञ्चालाः शूरसेनकाः । एवं ब्रह्मादि वै ब्रह्मावर्त्तादनन्तरः । एतेद्देश प्रसूतस्य सकाशादय जन्मनः । स्वं स्वं चरितं शिक्षेरन् पृथिव्यां सर्वमानवाः ॥

इति मनवे । २ । २७-२० ॥

(तीर्थ विशेषः । यथा महाभावते । ३ । ७३ ।४० ॥

"ततो गच्छेत धर्मज्ञः । ब्रह्मावर्त नराधिप । ब्रह्मावर्त्ते नरः स्तात्वा ब्रह्मलोकमवान्पुयात्" अपरश्च तत्रैव ।

"ब्रह्मावर्त्तं ततो गच्छेत् ब्रह्मचारी समाश्रितः ।
अश्वमेधमवाप्नोति सोमलोकश्च गच्छति ॥"

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17

Rig Vedic
VĀSTOSHPATI[1] SŪKTA
VISHWAKARMA SŪKTA

The accompanying sūkta called Vāstoshpati Sūkta, as found in Rig Veda Samhita[2], though couched in the pattern of a prayer, tells us about the benefits that would descend on the inhabitants of a house, built according to the principles of Vaastu Shāstras.

This is also indicative of the prevalence of Vaastu principles in the construction of dwelling houses during Vedic and pre-vedic periods.

Vishwakarma, referred to in the next sūkta, is of course the God Vishwakarma, the creator of the universe. But Mayan the architect cum scientist of Bhārat was addressed as Vishwakarma by Veda Vyasa himself in Mahābhārata. What does it mean? Is it really Mayan who is referred to in Vedas as Vishwakarma? It is really Brahmarishi Mayan implied in the Sūktas, as he happened to understand and apply the formula of creation or manifestation in all his creative activities! He was a great scientist and technologist whose knowledge and wisdom of the science of Time and Space & Rhythm and Form are too deep to be comprehended, by the uninitiated. Hence this concept had to lie in oblivion. This is not exaggeration but historically true also, though further research is going on. There is another fact that would astonish the present day scholars. Dr.Sthapati has identified Mayan as the author of **Pranava Veda,** said to be the first Veda, by Veda Vyāsā himself - **'eka eva purā vedaha pranavo sarva vāngmayaha' (Bhāgavatam).**

The sthapati's impression, as a result of deep researches from different angles and at different levels, is that Mayan, Indran, Viswakarman[3] and Dakshinamoorthy are one and the same personality. The shilpis of

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1 This means Vaastu Purusha Sūkta.

2 3500 years old - a conservative estimate.

3 Prajapati, Brihaspati, Vachāspati, Brahmanaspati, Vastoshpāti, Twashta - all point to Vishwakarma - used at different contexts, to denote specific functions.

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Tamilnadu have a Vaastu Shastra called **Aindra Matam**, containing Vaastu material based on**Aintiram**, a Tamil text of Sangam days authored by Mayan and published by the Directorate of Technical Education, Government of Tamilnadu, Chennai in 1987. The Aindra Matam is a voluminous work on Vaastu and looks like another version of and earlier to **Mayamata Vastu Shastra** wherein we come across the pentadic divsion of land into குறிஞ்சி, முல்லை, மருதம், நெய்தல், பாலை Kurinchi, Mullai, Marudam, Neidal and Pālai[1]. Because of the contribution of Aintiram, containing unique vaignanic sutras on Light and Sound '(ஒளி - ஒலி /oli)', Word and Form, சொல் - பொருள் / sol - porul; word and meaning) the key note on Vaastu principles, Mayan must have been christened as Indran (Aindiram) by tradition in as much as Veda Vyāsa named him as Viswakarma for his understanding of the formula of universal creation. In some contexts, in Rigveda, Indra and Viswakarma are juxtaposed, treating them as one and the same person. This is evident in the Vastoshpati Sūkta itself.

Another point of reference and relevance, in this context is, that there is a mention of the cessation of Indra festival in Tamilnadu, long long ago, on account of which, the city of Poompuhar, on the east coast of central Tamilnadu is said to have been swallowed by the sea, which is a fact, as recorded in the Epic Silappathikaram of second century A.D. and in other Tamil works of very great antiquity. **'இந்திரன்[2] மேவிய மெய்வரை உலகமும்'** Indiran meyvia meivarai ulagamum is a part of the four line verse[3] found in Tolkaappiam, the most ancient grammatical treatise of the language of Tamil, just like the Ashtādhyāyē of Sanskrit.

The **Pranava Veda** of Mayan, mentioned during the discussions, is a scientific treatise, telling us in technical Tamil, about how Vastu (energy) turns into Vaastu (matter) - how the subtle turns into gross - how the free space turns into material space - how **விண்** vinn turns into **மண்** mann - how sound space turns into word and form - how the invisible force turns into visible objects of Nature, on which scientific theory of the Vaastu Shāstras has been founded and functioning right from the very remote past, to date. Today the Vaastu Science is emerging with new wings to fly all over the globe.

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1 Kurinchi - hill and hilly terrain; Mullai - forest region; Marudam - agricultural land; Neidal - seaside land; Pālai - desert. Collectively called**ஐந்நிலம்** five fold terrain. Since desert is not habitable and good for nothing, it was dropped for building purposes and thereafter, the epithe**நாநிலம்** Nānilam, four fold terrain, came into vogue in later day Vaastu Shastras.

2 இந்திரன் என்ற சொல்லுக்கு மாற்றாக வேந்தன் என்ற சொல் வழக்கில் உளது.

3 "மாயோன் மேய காடுறை உலகமும், சேயோன் மேய மைவரை உலகமும், இந்திரன் மேய தீம்புனல் உலகமும், வருணன் மேய பெருமணல் உலகமும்"

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ऋग्वेदीय वास्तोष्पतिसूक्तः

सप्तमम् मण्ड लम् - चतुष्पञ्चाशत्सूक्तः ऋषि वसिष्ठः ।
देवता वास्तोष्पतिः छ न्दः 1,3 निचृत्त्रिष्टु प्र विराट त्रिष्टु प ।।
स्वरः धैवतः अथ एक विंशो वर्गः 21

1. वास्तोष्पते प्रतिजानीह्यस्मान् त्स्वादेशो अनभीवो भवा न : ।

Protector of the dwelling, recognize us : be to us an excellent abode, the non inflictor of disease :

2. यत् त्वेमहे प्रति तन्नो जुषस्व शं नो भव द्विपदे शं चतुष्पदे ।।

Whatever we ask of thee be pleased to grant: be the bestower of happiness on our bipeds and quardupeds.

3. वास्तोष्पते प्रतरणो न एधि गयस्फानो गोभिरश्वेभिरिन्दो ।

Protector of the dwelling, be our preserver and augmenter of our wealth: possessed of cattle and horses, Indra,

4. अजरासस्ते सख्ये स्याम पितेव पुत्रान् प्रति नो जुषस्व ।।

May we, through thy friendship, be exempt from decay: like a father to his sons, be favourable to us, like a father to his sons.

5. वास्तोष्पते शग्मया संसदा ते सक्षीमहि रण्वया गातुमत्या ।

Protector of the dwelling, may we be possessed of a comfortable, delightful, opulent abode bestowed by thee:

6. गहि क्षेम उत योगे वरं नो यूयं पात स्वस्तिभिः सदा नः ।।

Protect our wealth whether in possession or expectation: and do you (gods) ever cherish us with blessings.

7. अमीवहा वास्तोष्पते विश्वा रूपाण्याविशन् । सखा सुशेव एधि नः ।।

Protector of the dwelling remover of disease, assuming all (kinds) of forms, be to us a friend the granter of happiness.

[Rig Veda, 7th Mandala, Page 338 of H.H.Wilson, Nag Publication, Delhi]

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VISHWAKARMA SŪKTAM

Vishwakarma is the supreme deity in the Vedic Culture and references to His overlordship is met with in number of places in the Vedic hymns. In the accompanying Sukta, appearing in Rig Veda and dealt with exclusively about His glory, Vishwakarma is also a rishi - a human being - as referred to in the preface to the Sukta.

As projected and picturised in the Sūkta, He is the Primal Being and prior to Him nothing existed. He is Swayambhu. He is described here as one who is omni present, omni scient and omni potent and as one who generated heaven and earth. Not only these two, it was He who created the fauna and flora on the earth and stars and planets in the Space.

From the second sloka, commencing as किं स्विदासीदधिष्ठ ानमारंभणं it is very clear that He never created anything but He manifested Himself into what He saw before Him. He is the material, He is the mana pramāna (measure), He is the generator - all in one. Everything arose out of His inner urge or inner consciousness. He is all in one.

Vishwakarma is adored as Vāchaspati - Lord of Speech - since the Space is sound laden, from which all uttered words have taken aural forms. Sound is the raw material for sound forms to get generated. As earlier mentioned, He is a rishi superior to Sapta rishis possessed of Brahmajnāna. He is adored and worshipped by all beings.

ऋग्वेद दशम मण्ड लान्तर्गत

एक ाशीतितमसूक्तम्

विश्वकर्मसूक्तम्

1. य इमा विश्वा भुवनानि जुह्वद् ऋषिर्होता न्यसीदत् पिता नः ।
स आशिषा द्रविणमिच्छ मानः प्रथमच्छ दवरा आ विवेश ।।

The Rishi, the Hotri, our father who offering all these worlds has taken his seat; designing wealth by pious benedictions, the first inventor has entered inferior (beings).

2. किं स्विदासीदधिष्ठ ानमारंभणं कतमत् स्वित् कथासीत् ।
यतो भूमिं जनयन् विश्वकर्मा वि द्यामौ र्णोन्महिना विश्वचक्षाः ।।

What was the station? What was the material? How was (it done)? So that the beholder of all, VISHWAKARMAN (was) generating and disclosed heaven by his might.

3. विश्वतश्चक्षुरुत विश्वतोमुखो विश्वतोबाहुरुत विश्वतस्पात् ।
सं बाहुभ्यां धमति सं पतत्रै र्द्यावा भूमी जनयन् देव एकः ।।

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Having eyes everywhere, and having a face everywhere, having arms everywhere, and having feet everywhere, he traverses (heaven) with his arms, (earth) with his swift-moving (feet), and exists a god without companion generating heaven and earth.

4. किं स्विद्वनं क उस वृक्ष आस यतो द्यावापृथिवी निष्ट तक्षुः ।
मनीषिणो मनसा पृच्छ तेदु तद् यदध्यतिष्ठ द्भुवनानि धारयन् ॥

Which was the forest, which the tree, from which they fabricated heaven and earth? Inquire, sages, in your minds what (place) he was stationed in when holding the worlds.

5. या ते धामानि परमाणि यावमा या मध्यमा विश्वकर्मन्नुतेमा ।
शिक्षा सखिभ्यो हविषि स्वधावः स्वयं यजस्व तन्वं वृधानः ॥

Grant to thy friends, VISHWAKARMAN, at the oblation, thy best, thy worst and thy intermediate forms, and to these do thou thyself, possessor of the oblation, becoming augmented in person (by oblation), offer worship.

6. विश्वकर्मन् हविषा वावृधानः स्वयं यजस्व पृथिवीं मुत द्याम् ।
मुह्यन्त्वन्ये अभितो जनास इहास्माकं मघवा सूरिरस्तु ॥

VISHWAKARMAN, magnified by the oblation, do thou of thyself worship earth and heaven; let other men (who offer no oblations) be everywhere confounded; may he, rich in oblations, be the granter of heaven at this our (sacrifice).

7. वाचस्पतिं विश्वकर्माणमूतये मनोजुवं वाजे अद्या हुवेम ।
स नो विश्वानि हवनानि जोषद् विश्वशम्भूरवसे साधुकर्मा ॥

Let us this day invoke for our protection the lord of speech, the creator of all, who is swift as thought; may he, the bestower of all happiness, the doer of good works, be propitiated by all our oblations, (so as) to grant us his protection.

8. चक्षुषः पिता मनसा हि धीरो घृतमेने अजनन्नन्नमाने ।
यदेदन्ता अददृहन्त पूर्व आदिद्द्यावा पृथिवी अप्रथेताम् ॥

The maker of senses, resolute in mind, engendered the water, (and then) these two (heaven and earth) floating (on the waters); when those ancient boundaries were fixed, then the heaven and earth were expanded.

9. विश्वकर्मा विमना आद्विहाया धाता विधाता परमोत संदृक् ।
तेषमिष्टानि समिषा मदन्ति यत्रा सप्त ऋषीन् पर एकमाहुः ॥

VISHWAKARMAN, of comprehensive mind and manifold greatness, is all-pervading, the creator, the arranger and the supreme supervisor; him in whom the desires of their (senses) are satisfied with food, they call (him) supreme beyond the seven Rishis.

10. यो नः पिता जनिता यो विधाता धामानि वेद भुवनानि विश्वा ।
यो देवानां नामधा एक एव तं संप्रश्नं भुवना यन्त्यन्या ॥

He who is our preserver, our parent, the creator (of all), who knows our abodes (and knows) all beings, who is the name-giver of the gods - he is one; other beings come to him to inquire.

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11. त आयज़न्त द्रविणं समस्मा ऋषयः पूर्वे जरितारो न भूना।
असूर्ते सूर्ते रजसि निषत्ते ये भूतानि समकृण्वन्निमानि ॥

Those ancient Rishis who adorned (with light) these beings in the animate and inanimate world, offer to him wealth (of sacrifice) as praisers with abundant (laudation).

12. परो दिवा पर एना पृथिव्या परो देवेभिरसुरैर्यदस्ति।
कं स्विद्गर्भं प्रथमं दध्र आपो यत्र देवाः सम पश्यन्त विश्वे ॥

What was that embryo which was beyond the heaven, beyond the earth, beyond the gods, beyond the Asuras, which the waters first retained, in which all the gods contemplated each other?

13. तमिद्गर्भं प्रथमं दध्र आपो यत्रदेवाः सम गच्छ न्त विश्वे।
अजस्य नाभा वध्येकमर्पितं यस्मिन् विश्वानि भुवनानि तस्थुः ॥

The waters verily first retained the embryo in which all the gods were aggregated, single, deposited on the navel of the unborn (creator), in which all beings abode.

14. न तं विदाथ य इमा जजानाऽन्यद्युष्माकमन्तरं बभूव।
नीहारेण प्रावृता जल्प्या चाऽसुतृप उक्थ शासश्चरन्ति ॥

You know not him who has generated these (beings); (his life) is another, different from yours; wrapped in fog, and foolish speech (do they) wander (who are) gluttonous and engaged in devotion.

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18

TAALA SYSTEM OF SPATIAL MEASURES

The units of measurement and the system evolved out of them are of paramount significance in Indian context. They form the matrix of the very culture of the Indian nation. Infact, they are the elemental measures by which one can evaluate the greatness of its civilization and secretness of its continued existence over the millennia.

The system is unique, in that it is 'TIME' that is the basic unit of measure, be it linear or spatial.

In other words, this concept has paved way for the emergence of a rare system of units of time and space where Time and Space are also equated. Actually the Time units are converted into space units and applied to create tridimensional material objects of day-to-day life.

Time units are denoted by another term namely '**Taala**'. This is prevalent in the field of music, dance and poetry. But the same taala unit is applied in the design of buildings as well as town and city layouts! Vaastu mathematics which is numerical at subtle level, but geometrical at applicational level has its source in the concept of Time as unit of measure. The science of mathematics is rooted or anchored in the concept of Time as the vibration of energy and matter. The phenomenon is that the Energy changes into Time causing space, which takes spatial (material) forms. Absolute Time creates life forms.

In the domain of creative work of any art-form or object of utility, we know that '**movement**' and '**measure**' always go hand in hand. These two elements of form-figuration out of matter are indispensable, in the sense, that they ensure a definite shape of grace and beauty to the thought-form or experience endowed with tangibility and utility.

Every country has developed,

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therefore, a system of units of measurement of its own for its creative endeavour. For instance, we find today the 'metric' system, being in vougue in most force of the European countries, while 'foot-inch' system is still in vogue in the American continent.

Surprisingly in India, though we have adopted today the metric system of measures, from the very early times there has been a unique system of linear measures, the significance of which is yet to be known to the contemporary scientific world. This aspect of ancient Indian Science and Technology has neither been seriously taken cognizance of by the researchers, who go into the area of Indian civilization and culture nor looked into with any searching mind, either by the critics or by the architects of the world. **The extraordinary aesthetical beauty and the deep spiritual values of the architectural edifices and sculptural forms, and also every other artefacts are attributable to the unique system of linear or spatial measures adopted in the Vaastu system. The unit of measure that India has had before the advent of British system, implied a unique concept of 'Time and Space', the like of which would be rare to meet with in other traditions of art and architecture.** Fortunately they are still being cherished by the traditional practitioners in the field of architecture and sculpture. This time-measure has come to be designated in the scientific field by a peculiar term called'**Kaala maanam**' and in the technological domain as '**Taala maanam**' or '**Kaala maatra**', all meaning '**time-measure**'. This is of very deep significance. Have you ever heard of time-measure applied for the creation of buildings anywhere in the world, while 'Time' itself is yet to be understood or defined convincingly and scientifically? The 'Time' that is known to the Vaastu Science is independent or absolute-not solar time or lunar time which are physical and relative. You will be surprised to hear that this wonder has occurred in India. This is a unique concept associated with spatial measure, born of Indian mathematical genius.

There is a Tamil expression for signifying expiry or death of life. 'காலமானான்' 'Kaalamanan' is the epithet, literally meaning that 'one has merged with Time or got

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oneself dissolved in Time'. This means the expiry of life. This is very much expressive of the scientific concept of Time, according to Vaastu, as a force that creates, sustains and dissolves anything created. This is significant of the absoluteness of Time. In simple words 'Time' signifies emergence of life, growth and decay of physical body, that is transformation of energy into matter. Can we make a statement now that it is "Time that creates, sustains and erases life?" Yes, it is absolutely correct. This concept is not only applicable to all objects of the universe but also to the universe itself. According to Vaastu science, the subtle and material universes themselves are the product of 'Time'. In fact everything in this world and the universe is Time and product of Time[1]. This is because the universe has emerged out of the minutest particle of space, which particle is energy, karu (கரு), foetus, egg, bindu and Om light, just as a tree, a bird, an animal or a man has sprouted out of the karu or seed or egg and grown into what we see in the actual world of reality as animate forms.

This 'time', it must be noted, not only creates life but also gives 'form' to life. What is that which provides form to life? Is it not measure that gives form to life and makes it visible? Yes, it is 'time' that gives life and form. In essence it is 'Time' that changes itself into measure as consequent form. In short, 'time' acts as a creator of life and giver of form to life and allows it to move on earth. In fact 'Time' is all in all.

The physical measures as given in the table of time-units and those of space measures (converted into linear measures) are indeed vibrational measures or digital measures, which the shilpis apply in their design of spaces. They are universal measures and of universal applicability since they are derived from the vibration of the universal space. The conversion of time units into spatial measures signify that Time is equal to Space.

In normal life-situations, the vibration of inner space of individual beings, though this inner space is part of the outer space, it is discovered that they are not in harmony with that of the universal space. This disharmony is due

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1 Mayan says "காலமே எவற்றுக்கும் மூலம், காலமே கோலத் தோற்றம், காலமே ஞாலத் தோற்றம்" "Time is the source of all visual and aural forms. Time is the source of the form of the universe". "காலமே ஆக்கும், காலமே காக்கும், காலமே துடைக்கும்" "Kaalame aakkum, Kalame kaakkum, Kaalame tudeikkum". Time creates, sustains and erases everything created.

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to the time under which one is born. Now comes into our discussion the reference to the subject of astronomy/astrology - a branch of mathematics of Time. Every being is born under a star and grows under the influence of a particular star, the negative or positive effects, being the quality of Time. In normal circumstances, observing an individual's rise or fall, we comment that it is the work of time- காலம் செய்யும் கோலம், **'kalam seiyyum kolam', meaning it is time that has made things take such a shape**. One should understand that it is not a casual reference to the quality of time, but it is a scientific reference to the significant concept of time as causal element of life.

So, the identification of Time and its dynamics in form-generation and form-figuration is the zenithal discovery of Indian science associated with Vaastu tradition. The author-scientist is none other than the legendary Mayan of Ramayana and Mahabharata, though his origin dates back to several millennia.

This discovery of Time as the giver of life and developer of form, indeed, has revolutionized the pattern of culture and civilization of India and this accounts for its being different from their counterparts that existed in the past and existing in other regions in today's world. It also accounts for the eternity of Indian culture, while others have partly and fully disappeared from existence.

The time-measure is called **'Taala'** measure or **Taala maana**, in the Vaastu tradition of art, architecture and town planning.

Most of our people in India are aware of this Taala[1] measure as one, invariably applied in the field of Music and Dance (vide table of time-units furnished elsewhere in this chapter). But, that the same Taala system has been in force for centuries in the domain of sculpture and architecture is yet to be known to those outside the tradition. You will be struck with wonder, if you come to know that the same Taala system is also adopted in the composition of traditional type of poems, in most of the Indian languages, particularly in Tamil and Sanskrit.

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1 Taala measure is another name for kaala measure, meaning unit of Time. This aspect of Indian science is repeatedly taken into discussion in this book. The theory of vibration (time measure) or rhythm, as significantly adopted in Indian Arts and Architecture, plays a very basic and prominent role.

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This Taala measure is also denoted by another term called 'Rhythm' in English, invariably used in the field of music and dance, all over the world.

So far as the above mentioned three disciplines of poetry, dance and music are concerned, this measure of rhythm essentially plays a vital and orderly role and serves as a common instrument of creative work of well defined structure of sound and of exquisite beauty. It is no wonder therefore, that they have come to be grouped together, in the Tamil tradition, under a common title namely 'Muthamizh' (முத்தமிழ்) meaning "Three fold feature of Tamil culture". It may be observed here, that nowhere in other cultural traditions of the world, such an exalted status has been acccorded to such areas of knowledge and practice. They are directly connected to and highly responsible for the spiritual wellbeing of individuals involved in such pursuits either as performer or as recipient. The significance of this traditional measure will be further elaborated in another context.

But, what would be surprising for many to see in this context is, that the same rhythm is being handled in the design and creation of residential buildings, temple structures and sculptural forms from the very early times. Even in the case of designing and making of furniture, vehicles and household utensils, this taala system used to be applied in the past. Today, this system is being followed conspicuously and consciously by a limited number of Sthapatis coming in the line of hereditary designers and builders. This is because in the actual texts, the Taala system is simplified, modified and elaborated into a linear system of 'hasta' (cubit) and 'angula' (inch) measures for easier assimilation and application by practitioners. Because of this, the science has gone underneath with the technological material floating on the surface. I would like to stress one important fact at this juncture, that even the western translators of Vaastu shastras who would be naturally very deep and inquisitive, have missed to recognise the scientific significance underlying the origin and evolution of angula and hasta measures as implied in the table of Vaastu units. Perhaps they depended solely on literal translators and not on actual practitioners. Unless the researcher is a practical designer and builder, the science underlying the unit of measure of Vaastu-scale would remain far out of realization and reach. Unless

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researchers with technical background step into the field of Vaastu and their observations are taken note of by non-technical scholars, this lacuna will remain unnoticed for ever. In spite of this situation, there are exceptions to the comments of mine. Madam Alice Boner of Varanasi, for her masterly treatment of the subject matter of Vaastu Sutropanishad and Madam Stella Kramrisch for her monumental work on 'Hindu Temples' are worthy of mention here, even though they are not fully expressive of the scientific aspect of Art and Architecture of India. In spite of this, I would say that they are very close to the Indian spirit[1], underlying Vaastu principles and practice. What would be very surprising is that no Indian scholar has gone so near the spirit of Vaastu science and technology as the two madams were able to endeavour and land only on the area of the spirit. Their approach to the roots of Indian culture are unprejudiced. They must have kept their third eye open while dealing with Vaastu principles.

I would say that a casual look at the table of units offered in the Vaastu texts would not suffice to understand its significance because they are super scientific (not superstitious) and unheard of in the annals of any of the world systems. **The unique science behind this, is one which has its origin in the vibration of the amorphous space filling in and surrounding the universe!** The universe itself is a hypersensitive living organism impregnated with subtle qualites. Is this not astonishing? In the Purusha Sukta we have an inkling of the origin and evolution of energy into free space and such a vast space limited or quantified into numerical measures. ''सभूमिं विश्वतो वृत्वा अत्यतिष्ट द्दशाङ्गुलम्'' 'sa bhoomim viswato vrutva atya tishtad dasangulam'. The meaning is "He, the Purusha, surrounds the Earth and yet He stands high by a measure of 10 angulas". Purusha, here means the energy dwelling in all the objects of the universe as well as permeating the whole cosmos itself. This sukta signifies the amorphic quality of the space and also the intrinsic nature of space vibrating into a numerical measure of ten

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1 The recent research by scientist and architect of Australia by name Robert Lawlor has approached this problem very ably and acurately, though he is to take some more steps to reach the goal. (Vide chapter on 'Sacred Geometry'.

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angulas. At this context, I would like to add to clarify that the purusha sukta is indeed Vaastu Purusha Sukta. In the first **"International Seminar on Mayonic Science and Technology"** held in Madras in 1993, I explained this phenomenon based on Vaastu ganita. This phenomenon was illustrated with diagrams. These diagrams are used as the symbol of my **'Vaastu Vedic Research Foundation'** that is Kaala-ther or Chariot of Time.

India is, ofcourse, known for its mystical, metaphysical and mythological attributes or references occuring in the epics, puranas and religious texts, for all super human experiences, activities and achievements. But the Vaastu texts, though incredibly old, are scientific at core and technological in treatment of the subject. By direct application of technological principles and codes, the shilpis of India have created miniature universes on the Earth in realistic and tangible terms, putting into all that they have created, the dynamic qualities of the universal energy and made them pulsate with life. This phenomenon has occurred in every creation of the shilpis, all over Bharat. This may sound again mystical or mysterious but it is a fact of science and an achievement par excellence.

While commenting that the Taala system with respect to dance and music is time-unit in physical sense, its true scientific and technological significance is yet to come to light. This is because the dancer produces time-measures by the beat of her foot, by mere physical effort or exercise and the musician by the clap of his hands with similar easiness. Further the very word 'Taalam'(தாளம்) is actually derived from the word 'Taal'(தாள்) the foot, by the beat of which the time-units are easily produced by the dancer. But the point of anchorage or the source of the system as implied in the table of units and presented in the texts is yet to be identified or deciphered by the critics. This is not exaggeration. But such a system of Taalam as applied in the field of poetry may be known to the actual composer of poems in traditional mode, because the composer or poet has to bring together syllabic sounds or sound spaces and create a kind of 'speech rhythm' with all his consciousness at the time-space, or sometimes by verbal articulation by his lips. In other words, the composer should always keep himself conscious of time or possess time-sense to give effect to rhythm-bound speech-

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form to his thought. This word or sound picture is a tri-dimensional form of sound-space where sound is matter but subtle. The role or the effect of rhythm on sound space is implicated in the words of சொற்கட்டு (sorkattu) meaning structure of sound space or யாப்பு (yappu) meaning 'sonic metre' in the Tamil tradition. In Sanskrit, it is called 'chandas' meaning metrical structure. Hence we have 'anushtub chandas', 'gayatri chandas' etc. in the Sanskrit tradition. The fact of science in this context, is that the time-unit which is otherwise called vibration/ pulsation or துடி (tudi) in Tamil, is actually the vibration of our inner space (innerself) occuring in a particular order and in a particular numerical measure which in turn, being part of the universal space, becomes logically the vibrational measure of the universal space. The space referred to here, is a space filled with energy. The vibration of the energy is the causal element of space and spatial forms. This is the vibration that is designated as Time or Kaala in the Vaastu tradition. Can we not quantify this vibration? Yes this was possible for our Vaastu tradition established by Mayan the great scientist-architect of ancient India. The inner space and the outer space feel and vibrate their feelings into numbers which result into well defined and measured spatial forms automatically. Is not everything that we speak, spiritual? In actual life it is the intrusion of the brain or too much inclination to the materialistic side, which stifles the understanding and articulation. Hence the shilpis, spiritually inclined, used to say that traditional Indian music, Indian dance and Indian poems carry man beyond the mundane world, putting one at the level of spiritual bliss. So happens in architectural and sculptural forms which are called visual music or visual poems of the Vaastu Shilpa tradition.

This process of form-generation by the vibrant spirit takes place in between our experience and expression so swiftly that we have lost sight of the effective role of TIME, in the making of visual or aural forms. This particular aspect of the dynamism of the Spirit or Time was actually identified and quantified by Mayan, the Indian scientist. It is he who has defined Time as the frequency of vibration of Energy and also Time as absolute. This theory of vibration influencing the process of form-generation is applicable to the universal spirit. This is self manisfestation as the whole process rests in the hands of Time, which of

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course, is the innate quality of the Spirit- the Viswa Brahman. It would be amazing and interesting if I say that, Time is personified as Viswakarman and the Spirit as Viswa Brahman, the former being kinetic and the latter potential, in respect of their status. The 'Kinetic' is the offshoot of the 'Potential'. I believe that by now you would be able to bring into your mind the concept of Saguna Brahman and the Nirguna Brahman of Vedic culture. You must also be convinced by now that the Sthapatya Veda and the essence of the four Vedas run parallel to each other in respect of the concept of Brahman and experience of Brahman. It is not very well understood how the dynamics of the Viswakarman or Saguna Brahman has been realised and how the formula of Viswakarman, the creator of the universe has been realized and applied to create things of beauty and utility, so that the much coveted spiritual peace and spiritual wellbeing may be enjoyed by the human race during life on Earth. The place where this is applied and enjoyed in full measure, equally by all, irrespective of caste, creed or colour, is in the architecture of house buildings and in the architecture of temple buildings of Vaastu Shastras. Is it not Vaastu science colourless, non-sectarian and universal in its content and appeal? Yes, it is the science of the highest order. Is not Vaastu Vidya, the Brahma Vidya? Are not Vaastu science and 'Vaastu dharma' relevant in today's context? Yes, they are eternally relevant as they unify men of different climes, different languages and different cultures, with the universal spirit, while on Earth.

Coming back to the subject of discussion, I would like to say that it must be further clear by now, that what actually happens in our inner space is indeed the process of manifestation of our spirit and its experiences turning into spiritual forms in terms of spaces. This is what is actually denoted by the epithet 'inner vision' when it is of a high order. At top of all, there is a mathematics behind the transformation of feelings into forms which would be dealt with at another context. This science may be precisely and briefly stated as a science of energy and matter and a science of time and space and a science of Space and spatial forms.(Vide flow chart under chapter No.6). The process of manifestation happens not only at our inner space but also in the outer world of reality, by the vibrative spirit of the universe. The resultant products are called

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objects of the universe. They are all animate beings, not inanimates as held by some of our Indian philosophers. Nothing inanimate exists in the universe, according to Vaastu Vijnan. Everything is energy at subtle level and everything is embodied energy at gross level. In fine, the vibrative spirit of the shilpi is trained to generate live forms using the same mathematics mentioned earlier. In brief, the Vaastu shastras embody a concept that, **the universe is subject to a mathematical formula and Architecture is yet another manifestation of the formula.**

The shilpis of India were all Vedic scholars of Sangam days[1], professing in four other Vedas namely Sabda Veda (Poetry), Gandharva Veda (Music), Natya Veda (Dance) and Sthapatya Veda (Architecture and Sculpture), with the concept of 'Time and Space' permeating the disciplines. Beyond this, they had another Veda called **Pranava Veda**, which has the source material for all the four Vedas mentioned above. That is to say, they had**a pentadic group of Vedas ('five fold vedas')**, which number is confirmed by Veda Vyasa himself, in Srimad Bhagavatam. In the beginning there was only one Veda which branched off into four later, called Pranava Veda एकएव पुरा वेदो प्रणवः सर्व वाङ्मयः।। I have this Pranava Veda, in chaste technical Tamil. This will be soon published.

The concept of 'five fold vedas' is signified in the iconographical concept of VISWAKARMA as five headed and ten handed. This, later on became 'five headed Shiva', Sada Shiva.

At this context, let me pause and recapitulate certain important points discussed in the foregoing paragraphs and proceed further to elaborate, in simple words, the subtle science of time and space and their role in the context of form-generation and the benefits they confer upon human life. The Vastu Vedins of yore have recognised and implicated in the architectural processes a unique scientific concept. **If a part of the vast space is isolated and enclosed by a four walled structure, called building, it becomes an animated organism and starts pulsating with life in a particular order just like a human being having the same space enclosed in the physical body pulsate and emit patterns of energy-waves from within.** The

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1 Yes, evidences are available in the available Tamil and Sanskrit texts.

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traditional architect trained in this unique science and technology of Vastu and Vaastu has to design his building spaces in such a way that the vibrations prevailing inside and coming out of the main opening of the building are numerically equal to those of the occupants of the building. In short, the vibration of the space contained in the building should go in perfect harmony with the vibrations of the inner space of the occupant. Is this not looking strange and at the same time looking too simple to realize? This is a very great discovery of Mayan the Indian scientist. This is actually the science underlying the traditional concept of designing building-spaces in harmony with the subtle space. To live in harmony with gross nature as stressed by the contemporary architecture is not, however, disregarded by the tradition. Even in this context, the subtle qualities of gross nature are taken note of and the built-environment so created, that the indwellers may enjoy physical welfare also, in considerable measure.

Now from the illustrations you could have easily realised the importance of the theory of vibrations and the resultant unique systems of time-measures and spatial measures and equating time with space. Hence Mayan the Indian scientist has postulated that Time and Space are equal - காலமும் இடமும் ஒன்றே - Kalamum Edamum onerey. That the vibration of energy causes growth of material forms can be clearly understood from the vibration of a stringed instrument causing the emanation of sound, sound space and sound forms, which are material forms but invisible and hence subtle. Hence Vaastu Vignan was called Srishti Vijnan (science of manifestation) by shilpis of by gone days. This is true Vedic knowledge. This is true vedic wisdom possessed by the Shilpis of yore and interpreted technologically in today's Vaastu shastras. The Vaastu science and Vaastu technology lie therein interwoven or mixed up so thickly, that today's scholars are not able to comprehend the importance of Vaastu principles.

Further it is well known that all sound forms have their origin in ŏM sound", which is a minute particle of sound existing in countless numbers and enveloping the entire universe. It is indeed the raw material for all articulated words or wordy forms to be shaped out by human effort, that isTIME again. We also know that for each and every word that we utter, there is always a form either seen in the material world or experienced

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in the inner world inner being. If so, what is the raw material for all visual material forms to come into being? This question, we never put to ourselves. Instead we assumed that it is sound that is responsible for all material forms of the universe. Absolutely no. This will be readily agreeable only to the designer and builder, who is blessed to see his inner feelings taking visual forms. But what is that rare element that generates and figure out forms? Mayan, the progenitor of "Pranava Veda" has identified the existence of another subtle substance in the universe, which, he calls ÒM light'. This is inner experience occuring as luminous form. This is implied in the term 'enlightenment'. The significance of the impulse of human beings as also the fact of such impulses turning into pictorial forms at the level of inner space is exactly like the 'digital analog'-digits turning into corresponding intelligible forms-a power that the modern computer system is endowed with, so as to produce visual and aural forms on the screen. **The man-made computer lacks sensitivity and creativity whereas human computer is hyper sensitive and self activised and endowed with abundant creativity.** The birth and development of all objects of nature consists, therefore, in the vibration of universal energy based on a particular grammar of rhythm. This is signified in the Tamil statement தோற்றம் துடியதனில்- 'thotram tudiadanil'. This means that "creation is the resultant of inner vibrations". Mayan is more scientific and specific when he says that "Time creates, Time sustains and Time destroys". ''காலமே ஆக்கும், காலமே காக்கும், காலமே துடைக்கும்'' "Kaalamey aakkum kaalamey kaakum kaalamey tudaikkum". Further he says that "Time is the source of all physical phenomena and the universe itself is the embodiment of Time". ''காலமே எவற்றுக்கும் மூலம், காலமே மூல ஆற்றல், காலமே கோலத் தோற்றம், காலமே ஞாலத் தோற்றம்...''-"Kaalamey evatrukkum moolam, Kaalamey moola atral, Kaalamey kolatortram, Kaalamey jnaala thotram". Skanda purana is equally clear and scientific when it saysकाल : सृजति भूतानि, कालः सम्हरतिप्रजाः। सर्वे कालस्य वशगाः। कालो तस्यवशेसिथतः।।

There is an inherent rhythm in the vibration of the inner space of human beings as well as in the outer space of universal being, without which intelligible articulation or visual expression of inner feelings would not shape

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themselves into reality, that is, into intelligible aural or visual forms. They are recognised to be the manifest forms of the primal energy as well as our inner energy. This primal kinetic energy being inherent in all animate objects of the universe we, of Vaastu tradition, have designated it as **Vaastu Brahman** or **Vaastu Purushan**. The frequency of vibration (rhythm) of micro-cosmic and macro-cosmic energies is quantified by the great scientist Mayan (vide table of space-units furnished elsewhere) and there arose the concept of sound-vibrations turning into intelligible tridimensional sonic forms.**But they are the reflections of the luminous forms experienced by or occurring in the inner space[1].** This recognition further led to the concept of matter vibrating and turning into tridimensional material forms. **In fine, it is out of energy that matter flows out into two streams namely visual and aural-the visual preceding the aural forms.**

This is actually the context where people not related to Indian culture fail to understand. They treat anything Indian very lightly. Is it not really great that this Indian science of vaastu has defined Time and Space unequivocally and gone to the extent of equating time and space in a perfect scientific manner? This kind of equation of time and space, is not the discovery of today. This was discovered by Mayan the great scientist of India several thousands of years ago. Further we are aware of the fact that this concept of time and space is still a question, yet to be answered. In other words, Time is equated to Space - 'aural space' and 'visual space' - in the technology of traditional art and architecture. All objects of nature are therefore rhythm-bound-forms or time-bound-forms.The generation of forms out of the vibration of energy-space is **identified and quantified by Mayan as 'eight' and mutiples of eight, in an order.**Hence in the table of time-units and space-units you would find the evolution of the measure starting from zero and evolving into forms, in terms of multiples of eight. This number 'eight' is held to be very sacred and significant in

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[1] That is why Sthapatya veda is of the opinion that even for 'Sound' there is another source called 'Light'. Om sound is மூல ஒலி moola oli - primal sound and Om light is ஒளி மூலம் olimoolam - source of sound. So 'Light' - the 'Inner light' is the ultimate as well as absolute. ஒளி oli is God indeed. This Oli permeats the universal space.

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the Tamil tradition. The equivalent Tamil word for eight isஎண் (enn) which means both number 'eight' and 'to think' or 'thought' எண்ணம் (ennam). Enn and Ennam are synonyms in Tamil tradition. What is surprising is that this is the nature of the number 'eight', to turn into form[1]. This phenomenon is unquestionable as it is the tendency of Nature, says Mayan.

That 'enn' means 'eight' is very much explicit in the epithet எண் குணம் 'enn gunam' (eight fold qualities) of the supreme energy. Therefore it is clear that it is number which turns into thought-forms as implied in the epithet, and as in the expression 'digital analog'. **This is the basic formula of rhythms influencing the growth of all animate forms in a mathematical order and this is the fundamental measure adopted by the dancers, musicians, poets, sculptors and architects for all the development of artistic forms that they experience and generate from within.**

Don't we call the eight strokes of hand-beat with specific intervals as Adi Taala? Don't we have the strokes and pauses equal in terms of time-measures? **This is the primal taala-unit identified by our traditional science as 'fundamental unit of rhythm' and called it 'adi taala'.** This means that 'adi taala' is the rhythm of the universe and it is fundamental. This is the subtle taala experienced by all human beings at inner level. So the shilpis rightly remark that the Vaastu measures are derived from the vibration of the universal space, thus attributing divine origin for all their creations on the Earth. All other taalas are derivatives, thus giving rise to countless forms. **We could conclude that taala bheda (varieties in taala measure) accounts for rupa bheda (varieties in shapes or forms).**

Another point of surprise that you would meet with, at this context, is that the human body itself has undergone this rhythmical measure of growth, right from its emergence from the male principle as an atomic body or cell -கரு karu - called technically 'paramanu' in the Vaastu tradition. The rhythmic vibration of energy

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[1] This number or numerical measure is very meaningful in the Tamil tradition. This measure is indicated by the first letter எழுத்து eluttu, namely 'அ'. This 'அ' is not only the first letter in the Tamil language but it also implies number 'eight'.!!! For the first letter to becomeஅ', eight sound atoms (ஒலி அணுக்கள்) have to come together and change into sound form-that is'அ'. How great and significant the Tamil script 'அ' is? 'அ' is to be pronounced 'a' as innecdote, arrival etc.

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contained in the live cell is 'eight fold' with the result the measure of the full fledged human body consists of eight units of measure as 1,3,2,2 corresponding to the lengths of face-1, torso-3, thigh-2 and leg-2. **This means that the subtle qualities of primordial energy are put into the built space of the architect or into the poem of the composer or exhibited in the dance of the dancer or music of the singer, by the order or rhythm noticeable in the dynamics of Nature.** In view of this common key-note of the science of the spirit, the disciplines of dance, music and poetry are glorified as divine and signified as such in the group-name 'முத்தமிழ்' 'Muthamil' as earlier remaked. Added to that the language of Tamil itself is called தெய்வத் தமிழ் Divine Tamil in as much as Sanskrit is called Deva Bhasha in view of its relation to Vedic knowledge. To support this, it may be added that, the experiential meaning of the word 'Tamil' is of course 'sweetness' but the literal meaning or the scientific meaning of the word Tamil, according to Mayan, **is the measured material form that our inner feelings shape themselves into and come out into reality as aural or visual forms**[1].

I am indeed proud and delighted to draw your pointed attention to a technological fact that the time-bound art-forms are reflected in the architecture and sculpture of Indian tradition. The corresponding traditional word for sculpture is Pratima - a measured replica of the inner picture or image. In Tamil, this is denoted by the term சிற்பம்-Sirpam- which is another word for நுற்பம்-Nurpam meaning in both the contexts 'subtle form' or subtle form that occurs in our inner

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1 It is commonly known that the word 'Tamil' is the name of the language. Hence it is noun. But according to Mayonic science, it is also a 'verb' as it implies spiritual dynamism or behaviour of the inner being when it generates a word suited to its experience. This is form-generation and form-figuration. The process of word formation is as follows, according to Mayan. The language scientists, I believe, would find this interesting.

For any word to come forth into an aural form, it is the inner consciousness or feeling or experience that concretises itself into form. Secondly, for the experience to emerge into word - form the inner being has to undergo or travel through five levels of emotion namely அமிழ்தல், இமிழ்தல், குமிழ்தல், உமிழ்தல் and தமிழ்தல் respectively meaning "converging to a point" (withdrawal or ஒடுக்கம் odukkam) 'emerging and spreading', 'coming together and consolidating', projecting or delivering and finally "coming out in material form". In one word, Tamil means the extended form of "1"தானியல் வடிவு - expressed form of one's own self - spoken form of inner sound உள்ளொலி.

To understand better, and appreciate the genesis of the word Tamil and using it as a verbal form it may be quoted that புகழ் (pugal) is noun and புகழ்ந்து is verb. Similarly தமிழ் is noun and தமிழ்ந்து is verb. Still deeper significance is that every word is the creation of the 'self' not the intellect so far as Tamil words are concerned. Hence 'Tamil' is 'Spiritual' 'Divine'. Hence the epithet தெய்வத் தமிழ் Deiva Tamil.

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space- 'sculpture and architecture' in the Indian tradition. That taala-measure governs and guides the generation and development of sculptural forms is, of course, known to those who are consciously connected with or professionally related to the science and technology of Iconometry and Iconography. Similarly that architecture which is concerned with the design of spaces such as residential buildings, temple buildings, palaces, theatres and a host of other buildings of public use as also design of town and country layouts is also governed by Taala measure, would be a surprise to many of the indigenous as well as overseas architects. But this is a fact. How this is expressed, is indeed the theme of the Vaastu shastra that we have today in our hands.

In view of the underlying common- ness in the technological expression and implication of the system of taala-measures, the traditional shilpis have classified poetry, music, dance, architecture and sculpture under a few dignified group-names such as பஞ்சகிருத்யம், ஐந்தொழில், பஞ்சமரபு (Pancha krityam, Iyntholil, Panchamarabhu) - Iyntamil collectively meaning a pentadic tradition of scientific/ spiritual expressions. They are indeed a pentadic group of arts and sciences belonging to the Vaastu tradition of pre-vedic origin or Sangam days. On account of this exalted status of the Vaastu tradition it has been accorded the status of the Veda which is traditionally known as [1]Sthapatya Veda (Knowledge and wisdom of the sacred architecture).

Hence, I passionately addressed the scholars and researchers who attended the 8th International Tamil Conference, organised by Government of Tamilnadu, held at Thanjavur, in 1995, with a request to restore this ancient epithet of ஐந்தமிழ் - Iyntamil - which is spiritually dignified, in addition to being eminently apt and appropriate.

Let us turn to Vaastu texts and on to Musicology for the units of space and time. The tables that you see on the next page are lying in the ancient works for centuries together, but no one seems to have given any importance to them till date. They never questioned how a unit of measure could evolve out of

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1 Sthapatya Veda.

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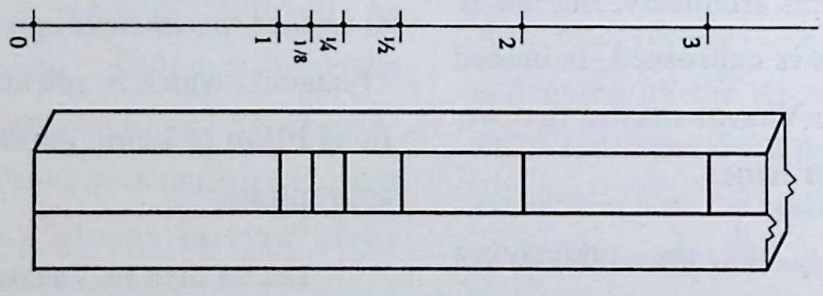
Angula Samkhya Table

THE UNITS OF TIME AND SPACE

Table of Time units	
8 Ganam	1 Lavam
8 Lavam	1 Kaashtam
8 Kaashtam	1 Nimisham
8 Nimisham	1 Tudi
8 Tudi	1 Kuru
2 Tudi	1 Drutam
2 Drutam	1 Laghu
2 Laghu	1 Kuru
3 Laghu	1 Puvadam
4 Laghu	1 Kaaka padam
From :	Taala Deepikai Vol.II of Prof.K.Ramachandran, Sundaram publication, Chennai.

Table of Space units	
8 Anus	1 Car dust
8 Car dusts	1 Immi
8 Immis	1 Ellu (Sesame seed)
8 Ellu	1 Nel (Unhusked paddy grain)
8 Nel	1 Viral (Finger measure)
6 Viral	1 Taalam
12 Viral	1 Vitasti
24 Viral	1 Thatchu Muzham (Kishku)
8 Hastam	1 Dandam
8 Dandam	1 Rajju
From :	Sthapati's Sirpachennool. Published by the Directorate of Technical Education, Chennai.



ONE EIGHTH OF THE ACTUAL SIZE OF KISHKU HASTAM

Eight times of this measure gives the full length of 'Kishku Hastam' which is 33 inches or 2'.9" in British units.

amorphous space energy and develop in an orderly unit resulting into a tangible unit of angula. Certain people, who do not belong to Indian culture did openly criticise saying that the Indian Vaastu is building castles in the air, not knowing that the Vaastu shastras did bring paradises from the air (space) and transplanted them on the Earth. They are the people who have damaged the reputation of Vaastu and of the creations that the Indian sub-continent is studded with. It is to

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enjoy these creations of Vaastu, that enlightened tourists from abroad throng them in great numbers. They stand aghast with wonder! The same is the case, when they hear Indian music or see Indian dance! They are struck with wonder not looking at the costumes or accompaniments in a musical concert but at the rhythm, order, balance, form, beauty and above all the spectacular expression of inner feelings in visual and aural forms, not met with in any of the world traditions in Art. The same is the condition with respect to the temple buildings and mansions that the Vaastu traditions have created and flooded the Indian space with. For all these, the units of measurements, their origin and development from the 'paramanu' or minute particles of space and the order with which they vibrate are responsible. The subtle tables showing the evolution of measures are, as stated below. It may be appreciated here that how time units and space units are numerically equated. That is to say that time units are converted or changed into space-unit.

The shilpis of Tamilnadu use a scale of 24 manangulas that is equal to 33 English inches or 2'.9". One manangula measures $1^{3}/_{8}$" and 24 such manangulas make one hasta. This is said to be the standard measure. This is called KISHKU-HASTA. Half the Kishku is Vitasti and half the Vitasti is one taala, which is 6 angulas long. Each angula is $\frac{1}{8}$" of an English inch. It would be surprising to know that this angula is derived from the vibrational measure of the Space. (Vide table of "Space units" on the previous page).

When you look at the table you would find that the primal unit of measure starts abruptly from 8 anus and goes gradually into multiples of eight and stops at a particular point of evolution. The table of the growth of anu is as follows:

8 anus	= 1car dust	தேர்த்துகள்
8 car dusts	= 1 immi	இம்மி
8 immis	= 1 ellu	எள்ளு
8 ellus	= 1 nel	நெல்
8 nel	= 1 viral	விரல்

one Viral is called manangula (standard measuring angula) $1^{3}/_{8}$" / manangula. Anybody not related to Indian culture would naturally go into deep laughter because all units of measure starts from visible measure and goes down into divisions, all being visibles and tangibles. For instance, the inch-foot of British units starts from furlong, yard, foot and inch, while furlong is a unit assessed from the

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non-stop running distance of a house in a street.

8 furlong	=	1mile
1 furlong	=	220 yards
1 yard	=	3 feet
1 foot	=	12 inches.

In this British unit, yard is taken as the standard unit of linear measure and other measures go up and down as detailed below:

1 yard	=	3 feet
1 foot	=	12 inches
1 inch	=	8 divisions
		16 divisions
		32 divisions etc.
220 yards	=	1 furlong
8 furlongs	=	1 mile.

All these measures can be easily and accurately applied in architecture. But, on the contrary the Vaastu units start from invisible atoms and grow into tangible measures and forms. Why this? What does it mean? This was criticized seriously by Indian scholars, once upon a time. Even today we have some such critics, who are non-technicals. This is because, this unit starts from meta-physical plane. I would say that this is subtle science, in which our great seers-rishis, maharshis, siddhas, munis, mamunis were experts to understand and check out the so-called spiritual life on earth.

Again I have to draw the attention of the readers to the concept of the source of emanation of the space and spatial form - emergence of gross material forms from the subtle energy, which is denoted as luminous space or space-foetus.

We have seen in another context that the vast space surrounding us and the minute space residing in the cave of our heart are one and the same in respect of quality and quantity. The space is replete with invisible minute particles of energy called paramanu, and those visible or tangible as anus.

In short paramanu is invisible (to our naked eyes) and anu is visible. These two things (subtle and gross-energy andmatter i.e. Vastus) do exist at these two levels.

So from invisible, subtle level the 'paramanu-space'(அணுஇடம்) goes into vibration (movement) by its own self effort and come together in an order (rhythm) whereby a tangible material form is developed or evolved. Hence in the table there is an abrupt evolution of 8 atoms that turn into one car dust(தேர்த்துகள்). From anu (அணு) came forth anukkam (அணுக்கம்) and into kanu (கணு) as a division noticeable in a sugarcane or bamboo. So, that which has evolved out of paramanu (micro particle of energy),

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the Vaastu unit of measure, is a visual unit. This is linear by virtue of its growth in a line. Mayan says that a line is the resultant form of atomic space arranged in an order, 'points make linear form'. (புள்ளிகளே கோடுகள் ஆகின்றன).

Vaastu Shastra is therefore very clear when it postulates that-

"परमाणु क्र मात् वृद्धं मानाङ्गुलमितिस्मृतम्"

"Paramanu kramat vriddham manangula mitismrutam". That which grows out of Paramanu, the micro particle of energy is called measuring angula - 'manangula' where mana means 'measure' angula is 'digital units'.

Further, the Shastras say that anu can be seen as car dust or as a minute particle of dust floating on a ray of sunlight that goes piercing through the aperture of a hut-roof. But the Shastras say that paramanu can be seen (understood) only by sages. (scientists) -

"परमाणुरिति प्रोक्तं योगीनां दृष्टि गोचरम्"

"Paramanuriti proktam yoginam drishti gocharam". That which is described as paramanu becomes visible (intelligible) only to scientists.

As discussed earlier, this unit of measure is derived from the rhythm of the universal space and identified to be equal to that of the inner space under ideal conditions. If variant with respect to inner space and vice versa, troubles shoot forth. Tuning the inner vibrations to those of the vibrations of the outer space is the concern of the Vaastu shastras. This ensures not only harmony in time units but in space units as well.

There are certain extrapolated spatial units such as,

Praajaapatyam (25 manangulas)
Dhanur mushti (26 manangulas)
Dhanur graha (27 manangulas)
Praachyam (28 manangulas)
Vaideham (29 manangulas)
Vaipulyam (30 manangulas) &
Prakeernam (31 manangulas) and

also the contexts at which they would be operated. They are not elaborated here. But there is one thing that has to be noted and kept in memory. You may feel proud of the concept underlying the various types of 'hasta-units'. The 'kishku hasta' is of 24 units. This is basic and hence moolakkol மூலக்கோல் or muzhukkol முழுக்கோல் which came to be called muzhakkol முழக்கோல். Hence it is held to be standard measure, applicable to all types of works and universally applicable too. If so, why other types? This is indeed a reasonable question worthy of being

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answered and worthy of being noted by language scientists.

In Mayonic science of space, there is a theory that the word-forms called ஒலிப் பொருள் (oli porul) germinates from the particle of sound called ஒலி அணு oli anu and also ஒலி ஓம் oli om. What happens immediately thereafter? Because of the conscious effort of inner space the micro sound grows and passes through certain well defined stages of what is called 'pitch'es as in musical notes. These notes start from the lowest 'swara' called 'sa' ச and ascend up a ladder of notes namely ரி, க, ம, ப, த, நி ri, ga, ma, pa, da and ni. This is in music. But in the language of Tamil they are அ, இ, உ, எ, ஒ (a, e, u, ai, o) and ஐ, ஔ (aii and auv) that are equivalents to ச, ரி, க, ப, த and ம, நி [sa, ri, ga, pa, da and ma, ni]. On both cases the swaras or aksharas are the created forms of inner vibrations as in the case of vibrations of musical instrument (say Veena). The increase in the frequency of vibration accounts for higher notes. These notes of sound are called sound spaces or padas in music as well as architecture. As such we have pancha swaras (five notes) first and then Sapta swaras (7 notes). In the context of linear measure of space units, we have seven units, namely

1. Prajapatyam
2. Danurmushti
3. Dhanur graha
4. Prachyam
5. Vaipulyam
6. Vaideham
7. Prakeernam

About the Universal octave:

From the study of the table, can we now say that the number 'eight' has assumed a very significant status or quality of a unitary measure? Is this not a fundamental universal, basic unit of measure of time and space? Is this not spiritual too? When this fundamental unit of measure of 'eight' is taken as time-scale, it goes by the name of 'rhythm' and when taken as space-scale it is again called by the same name of 'rhythm'. The former is rhythmic time and the latter is rhythmic space. Since these rhythms are derived from the universal time or universal space, this particular rhythm has come to be designated as 'universal order[1]'. And this concept is

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[1] We speak of 'universal order' often either consciously or unconsciously. But this order has not been discussed and defined scientifically. The technical tradition of Vastu has or must have the right and background for interpretation. The order of Time/Space is really the order of the universal dynamism implied in all our expressions. This is a scientific concept of Vaastu shastra.

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brought down to application level and redesignated as Taalam. By virtue of its being derived from the universal space, it is known as 'prapancha-kaalam', 'prapancha-taalam' or 'prapancha-layam' (universal rhythm).

About individual layam and universal layam : Since the subtle space enclosed in our body is part of the universal space, it is mere logic to say that the taalam or layam of our inner space should be the same as that of the universe. But in reality, it is very rare to find an individual with inner layam equal to that of the universe. If the individual layam is in tune with the universal layam, the individual concerned is said to be in commune with or in harmony with the universal being or spirit. In that case the individual is said to enjoy spiritual strength, growth, peace and bliss.

As this rhythm (layam/taalam/order) is the measure of spatial or timal vibrations, we can treat this as a scientific phenomenon. If the vibration of the inner being and that of the universal being resonate or are made to resonate with each other, the individual concerned is said to experience spiritual growth and enjoy spiritual peace and bliss at heart. This resonance and consequent growth of material space or form may be appreciated if we take up the example of two stringed instruments tuned at one and the same pitch and examine the behaviour of the vibrations emanating therefrom. When one of them is aroused by plucking the string, the other one, remaining unplayed would automatically get aroused producing sound and resonating with the first one. On account of this phenomenon, the volume of sound increases, implying thereby the growth that the material sound experiences. Similarly if the vibration (order) of the individual-self goes in consonance with the order of the universal self, the former resonates with the latter and as a result the individual self grows in strength leading to physical and spiritual well-being.

Application of rhythmic measure in building design : Now the question is, how this rhythmic measure is related to the architecture of a building? Let us examine the architectural design concept in the context of this phenomenon.

I have already introduced you to the phenomenon of a building becoming a living organism, by virtue of its enclosing the energetic space and also to the

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vibrations that it is capable of generating from within. When this building becomes the living space for an individual or a family, for the occupants to live in harmony with the vibration of the building's inner space, the order attributed to the universal space should be established within the built space. Since this order or rhythm is a numerical measure - **I would like to call it architectural octave** - the architect with the knowledge of the science and application would design the building in that octaval measure so that he would make the indwellers to live in harmony with the spirit or spiritual rhythm.

Taalam as Time measure and Space measure in practice : Just like the musical octave handled by the musicians, the architectural octave is the scale used by the shilpins of Bharat from the very early times. As earlier pointed out, it is a rhythmic scale of musical forms as well as architectural forms involving units in multiples of eight starting from paramanu unit of TUDI or TRUDI in music and PADA in Architecture. This unit of time and space is known as **Taalam** (தாளம்), which I mentioned at the outset. This word is derived from the foot-beat of dancers. The foot is called Taal (தாள்) in Tamil and from the beat of hand and fingers calling it as Kai-Taalam (Kai = hand, Taalam = beat). But in architecture and sculpture this time measure is taken as a space-measure as we have seen earlier. To quote an example, the face length of human beings - from hairline to chin - is reckoned as one taalam in the work culture of shilpins. 'Taalam mukhamevacha' तालं मुखमेवच is the traditional definition for Taala. It means that taalam is of one face-length. This will be elaborated later, at an appropriate context.

Hastam - Vitasti - Taala measures in F.P.S. System : There is also another way of assessing the linear measure of Taalam, by streching the palm sideward and measuring it from the tip of the thumb to the end of the little finger. Any how, the Taalam, as measuredor derived from the space (paramanu) is said to be the standard or universal measure applicable to all private and public spaces. This is the paramanu-measure which has developed into Taala-measure as shown in the foregoing 'Angula Samkhya table'. So one Taalam, as seen in the table, measures 6 angulas (viral' in Tamil, meaning finger) and from this Taala

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measure is evolved the basic hasta-measure of 24 angulas(four times that of taala measure). In the Tamil tradition, this is called 'Thachchu muzham'தச்சு முழம் meaning carpenter's scale. The same is known as 'Kishku Hasta' in Sanskrit texts of Vaastu and Shilpa. When measured and expressed in F.P.S. system,both the Kishku and Thachu measures a length of 33 inches (2'.9") each. Further, half the kishku is stated as vitasti (वितस्ति) ஜக முழம் which is of 2 Taala long (12 angulas), which is used as Hasta Pramaana in certain areas outside Tamilnadu. This is almost equal to the fore-arm with palm and fingers stretched. **As such, the universal measure of Taalam is 8¼" inch**. The application of all these measures is very simple and common in the work-field of shilpis. Other measures such as Dandam and Rajju are all multiples of hastam or taalam, as the case may be.

Ashta taalam and Nava taalam and their significance: Now if you observe the proportions of the human body closely, you would find that the measures of certain parts are not taken into account, namely, ushnisham, (hair to skull), grivam (neck), Janu (Knee-cap) and Padam (foot). Actually each of the missing parts is found to measure ¼ of the face length or one fourth of the taalam. This gives totally one taalam, which when added on to the body already measured, makes it to measure 9 taala height (vide figure). This measure is called 'Nava taalam' and the former as 'Ashta taalam'. These two measures are considered to be basic and fundamental, the former conforming to the octaval measure of spiritual taalam. The significance of the 'nava taalam' is that, those minor parts of ushnisham, grivam, janu and padam are all links provided by

Equation between aadi taalam and human body: In the musical tradition, we have a full fledged Taala maanam, popularly known as Adi taalam. This consists of the following spatial proportion of time (Taala Samkhya).

Thattu 1	Count 1 Count 2 Count 3	Thattu 1 Veechu 1	Thattu 1 Veechu 1
Head	Torso	Thigh	Leg
1 taala	3 taala	2 taala	2 taala

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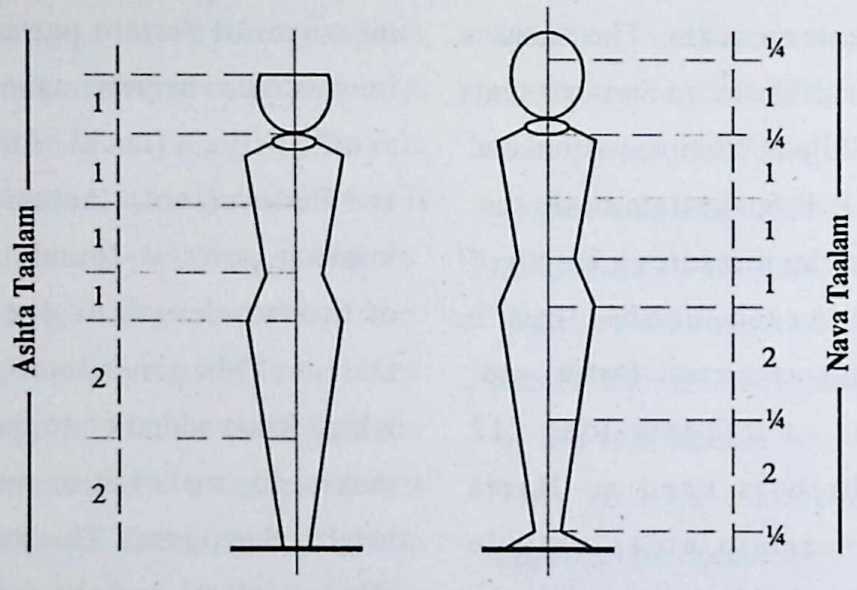
Let us now turn to Nature and its manifestation into human form involving spiritual rhythm in physical terms. The architectural or the universal octave is identified to exist in the human form. Taking the face length as one taalam, the human body is measured as follows.



ASHTA TAALAM AND NAVA TAALAM — MANDUUKAM AND PARAMA SAAYIKAM AS INTERPRETED WITH RESPECT TO HUMAN FORM

From Subtle to Gross; Ashtataalam to Navataalam (8 to 9)

	Ashta taalam in iconometry	Adi taalam in music and dance
Face length	1 Taalam	1 Taalam
Neck bottom to chest line Chest line to Naval Naval to lower abdomen	1 Taalam 1 Taalam 1 Taalam	3 Taalams
Length of thigh	2 Taalam	2 Taalams
Length of leg	2 Taalams	2 Taalams
	8 Taalams	8 Taalams*

Total height or length — 8 Taalams.

Note: * The human body is proportioned into Aditaalam. How deep the Vaastu Science is in identifying human measure with that of music?

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nature for mobility of the human body. The Vaastu science says that in the transformation of human body from subtle to gross, there exists no difference in quantity and quality, though physically the eight units change into nine units and differ in their outward appearance. (This is a subtle scientific truth which could be proved mathematically). Hence the ashta taalam is treated as subtle measure (Sukshma Pramaana) and 'navataalam' as gross measure (Sthula Pramaana).

In this context it is apt to point out that the Taala maanam of the human form is the abstraction of the physical/gross into numerical value or form, whichaccording to Vaastu science, if further abstracted, would turn into time measure. On further analysis of the phenomenon, the human form would be found to convulse into the basic units of musical octave, which in our context is 'Ashta taalam' of eight units. This is the universal rhythm, in abstraction. Hence, in the tradition, the human form, thesupreme aspect of god's manifestation is held, as the fullfledged and sweetest of (visual) musical forms.

Thattu means beat; Veechu is pause. Total 8 units. In abstract sense, this is again the octave, we have been discussing on. This is the physical expression of universal rhythm. The song set to 'Adi taalam' assumes a divine form.

Further, if you closely observe the human octave, the same spatial proportion might be identified. This is the uniqueness of the science and technology of Vaastu Vedic origin.

Architectural octave in Vaastu Purusha Mandala : There is another subtler scientific truth which proves the existence of the universal rhythm or octaval scale with its roots in the Anu-Idam (paramanu space) அணு இடம் or anukkalam (paramanu kaalam). In the Vaastu shastras, this phenomenon is designated as Vaastu Purusha Mandala with a basic and specific layout of $8 \times 8 = 64$ units called Manduka Vaastu. This is otherwise called energy grid or luminous grid. This is the picture of the **Ultimate - the unitary anu or atom - going into a split or explosion for manifestation, in the pattern of 8×8 units.** The universal creation takes place at this point, in a single anu. Anu is the ultimate visual manifest form of Brahman. (anoraniyan mahto mahiiyaan). This is the genesis of the universal rhythm. This is the science of universal creation.

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The concern of traditional designer : Practically speaking, if an individual's height does not conform to the navataala pramana, we may remark that his subtle measure (individual rhythm) is said to have fallen short of the universal rhythm. The traditional architect has now to discharge therefore a couple of duties as indicated below, while designing a house for the particular individual.

1. To elevate the individual in spiritual terms to that of the ideal subtle i.e., from personal rhythm to universal rhythm.
2. To create a space where the individual would find his own vibrations responding to the vibrations of the space so created.

Culturing of the individual spirit: The first point mentioned above involves the culturing of the spirit of the individual to that of the subtle and universal. Now comes in, Yoga and Yogic practices. This falls under subtle, though gross practices (methodology) always precede. Our Indian religion[1] and the religious practices have a lot of streams of practice - from gross to subtle - practicable and appealing to all common folk. The 'antaryagam' and 'bahiryagam' attributed to Agamic science have therefore a deep significance in Indian culture. Music, dance, poetry, sculpture and architecture concertedly aim at culturing of the spirit. Hence the traditions in music, dance, poetry, sculpture and architecture were enjoying an elevated status, in the past, in the life of our society. Are you able to realize now why all these arts were brought and nurtured under the roof of the temple? Commercialization never existed in our ancient traditions! This is how our society as a whole was elevated to a high spiritual status.

Design suited to individual psyche : As regards the second point, the traditional architect, without going into the aspect of culturing of the spirit, limits himself, to creating a space suited to individual psyche. This would bring peaceful life to the occupant. This is achieved through a calculation called **Ayaadi-gananam** where the individual's birth star or height or finger length etc. is abstracted and the dimensions of the living space arrived at.

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1 It is not Hindu religion but Buddhism, Jainism and other minor system have adoptedd Vaastu principles for all their forms of worship. So I have consciously used the term Indian not Hindu.

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It needs no telling that the old traditions and traditional sciences of India with their roots in the science of Time and Space should be preserved and promoted at all costs. Our traditions are spiritual, hence eternal. If the efficacy and strength of the Vaastu Shilpa tradition and its spiritual technology are realized, the question of its relevance today and for all times, would never arise at all.

So far we have discussed in detail the traditional concepts of Time and Space, as implied in the Vaastu shastras and as applied in the practical field. Without going further in the same long way, let us take a short cut to have an extensive and close view of the essence of the science of energy and matter, time and space and changing of space into spatial forms.

When we go into the technological domain all will be clear and easier too, to assimilate and apply the principles with ease and pleasure.

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Time, Space & Spatial form in a nut shell

- There are two spaces - the inner space and the outer space. They are energetic spaces. That which happens within also happens outside. They are experimental as well as experiential.

- The Inner space, the primal creative centre, is the **Akasam**. It experiences, vibrates and transforms itself into the objects of its own experience.

- The outer space is **Paramakasam**. It too experiences, vibrates and transforms itself into the objects of the Universe.

- Vibration of space is realised as Kaalam, which means Time. Time is immanent in the primal space which is its manifest form. Time is indeed the force of energy, coemerging with consciousness. Its presence is recognised only when conscious space attempts to give expression to its experience. So Time, emerging as vibration, is quantified numerically. This is analogous to the quantifying of the vibrations emanating from a musical instrument (say Veena) and turning them into 'sapta swaras' the vowels of music. The human body is likened to a Veena called 'Sareera Veena'. It also produces sapta swaras (அ, இ, உ, ஏ, ஊ, ஐ, ஔ a, e, u, ae, o, ai, au). The frequency of vibration is a quantified measure of sound. Hence it is a number. The numbers turn into spatial (material) forms again by the effort of Time. So, Time becomes the creator, the created and also the material for creation. Further, Time is not only the causal element of all material forms, but cause of their growth and dissolution as well. Time is Absolute, not relative or physical. The all pervasive **Eternal Time** is **Kaala Brahman** or **Kaala moolam. In the technological domain the Kaalam is brought into role by a unit of time-measure called Taalam.**

- To the artist, **Taalam** is the rhythmic definition and ordering of Time. It is **Kaalamatra**. The rhythm (taalam) is the inherent quality of micro and macro spaces.

- **Time** and **Space** are equal, since it is Time that changes into space. **Taalam** as time-measure is used in poetry, music, and dance, and **Taalam** as space-measure, is applied in architecture and sculpture.

- Rhythm-bound musical forms and rhythm bound architectural forms are inviting, alluring and spiritually elevating.

- Through the grammar of the **Taalam**, the **Shilpi** creates and his feelings take forms. Through the grammar of the Taalam, the **Divine Shilpi** creates His own objects of the universe. Indeed their scale is one and the same!

- The shilpi expresses his feeling-forms in two ways - aural and visual. **Brahman** though one, manifests himself into two Brahmans - one as **Naada Brahman** and the other as **Vastu Brahman**. They are the sources of **Vaak** and **Artha** (word and meaning) respectively.

- Seeing himself in his own creations, the shilpi experiences joy. The Divine Shilpi too, seeing Himself in His own

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manifestations, experiences joy. It is an advaitic experience, the experiencer becoming the experienced. **Hence the traditional experience is that the sculptor becomes the sculpture; the poet becomes the poem.** He sees with his own eyes the extended form of his I-ness (Thaaniyal Vadivu). How blessed he is! He realizes Brahman. He becomes 'Brahmavid'.He experiences Parasukham.

☞ As the grammar adopted by the Human shilpi and the Divine shilpi are one and the same for their creations, it is absolutely true that the Divine Shilpi delights to reside in the Human Shilpi's creations. It is indeed His own form wrought out in his own measure and material. Hence the Human Shilpi's creations are worship worthy.

☞ He holds the forms created from this experience as Spiritual and Divine. He takes them to the people and evokes in them the same vibration, the same experience and the same joy. He re-moulds his rasika (the spectator) in his own substance and order, it is re-creation in flesh and blood.

☞ This response or resonance, he calls **Rasaanubhavam** and the communion, **Bhakti**, the **Lover** and the **Loved** fusing into the one timeless, eternal substance, the **Vastu**.

House building or Temple building, set to Taalam, is a musical form; a living organism - says Mayan, the ancient scientist of Indian origin and author of Mayamata Vastu shastra and Surya Siddhanta, the most ancient treatise on astronomy.

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SELECTION OF BUILDING SITE

Earth as a living organism and a primal material substance - Vaastu Purusha as earthly energy - Qualities of earth - good and bad soil - their effects on human life - certain simple tests but of great importance - living in harmony with the physical and subtle qualities of the Earth - good soil ensures and promotes healthy life on Earth.

The technology of Traditional Architecture lays enormous emphasis on the selection of building site for human habitation. The traditional **'science of Vastu and Vaastu'** looks upon Earth as a living organism with its origin in the primordial energy, attributing certain human and divine qualities. The Vaastu shastras address the energy contained in the Earth, as **'Vaastu Purusha'**, where 'Purusha' means the subtle energy that permeates the Earth and 'Vaastu' is the material body of the Earth that evolved out of the energy. Hence Earth is considered as an embodied energy. In abstraction 'Purusha' is but a subtle substance 'Vastu' or essence of the subtle universe which, in other words means 'universal consciousness', 'awareness', 'sensitivity', etc. In Sanskrit it means 'Prajna' or 'Prajnanam' and 'Unarvu' (உணர்வு) in Tamil, which is denoted by another technical word namely Olli[1] (ஒளி) and more understandably and precisely as Olli unarvu (ஒளியுணர்வு). This 'Unarvu' or 'Prajna' of the Earthly space is realized and equated to our own inner consciousness. This is recognised from the existence of subtle and physical qualities expressed by Earth's inner vibration, its self spin and forward motion. Earth is therefore a live material object suspended in the space and existing as part or extension of the universal being.

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[1] There are two words in Tamil, sounding almost alike, namely ஒலி and ஒளி, the former meaning 'sound' the latter 'light'. To distinguish between these two terminologies ஒலி is denoted by OLI with one L and ஒளி with two Ls. That is, ஒலி - OLI - sound / ஒளி - OLLI - light.

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Hence, Earth is evoked and poojas offered before excavation of Earth for the construction of buildings, for residential or any social need. This is evident from the performance of rituals such as Vaastu homa and Vaastu bali. In other words this is Vaastu shanti, meaning appeasement of the Earth.

All animate objects including human beings are tied to the Earth, with no scope for escape, and therefore they should try to live in harmony with its subtle and physical qualities. This is exactly an emotional integration, that the Vaastu science establishes between man and the Earth and finally between man and the built space. The built space is, infact, created by man according to a formula with which the Universal Being has created the material objects of nature. This integration was therefore felt indispensable for peaceful life on Earth and in the built environments. The understanding of the qualities of Earth and reaping the benefits therefrom are, therefore, considered as of paramount importance for a harmonious life on Earth and with Earth. It is indeed analogous to a life with our[1] kith and kin and near and dear ones. How is this kind of emotional integration (ecological friendliness in physical world) achieved or effected? There are two streams of approach to this problem. One is gross, as we are going to see immediately, and the other is subtle which is dealt with elaborately in other chapters also. The uniqueness of the science of Vaastu rests in the interpretation of the subtle quality of Earth and its technological extension to the design of buildings whether of secular or spiritual kind. Just as we, the human beings, harbour in our heart an atom of the divine energy (Purusha), by which we are able to vibrate with life and send out waves of energy from within in a particular order, the Earth also vibrates from within sending forth energy waves in the same order. The Vaastu technology, with a mathematical process brings about a harmony between the orders. This is emotional or spiritual integration. This is the science underlying the concept of Vastu and Vaastu.

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1 The Earth is treated as a living being in the Vaastu culture. All living beings are tied to the Earth. None can remain isolated from her warmth and love. She takes care of all lives on the Earth, as a hen of her chick. Maya, the scientist of Vaastu tradition looks upon Earth as a giver of plenty as 'Kamadhenu' the 'Divine cow' - सुरभिप्रतिमां भूमिं गृह्णीयात् सर्वसम्पदे। So very high regards are paid to her and addressed as divine mother. Accordingly a prayer is made to the Earth before starting earth work excavation for foundation. "अस्मिन् वस्तुनि वर्धस्व धन धान्येन मेदिनि। उत्तमं वीर्यमास्थाय नमस्तेऽस्तु शिवा भव॥" O Mother Earth! may you fill the plot with your energy and make it fertile. May you bless us with wealth and prosperity. I bow to thee!" This kind of love and respect are showered on Mother Earth by the Maayas of Mexico.

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The Vaastu shastras, in a mythological language - this is the language of science handled by ancient scriptures and in fact there was no other way left for our ancestors to convey the subtle basics of the science of Vastu and Vaastu and enable us to appreciate and remember the intricate processes with which the energy (Vastu) gets transformed into material objects (Vaastu)-has narrated the birth of Earth as a powerful demon (demonic force or energy) coming out of the space controlled and disciplined into an orderly form by celestial forces called 'devas', meaning 'luminaries' or 'energies' coexisting with the subtle body occupying various parts of the Earth. The birth of Earth as per Vaastu science takes place from the consciousness of the universal being through an explosion from within the space. It emanates from an atom of energy and grows into a macro form by virtue of the vibration of the subtle energy, into material Earth. In fact, it must be noted that what is subtle intrinsically, takes material form ultimately. The gross is the reflection of the subtle. It is indeed a replica and hence 'pratima' or 'padima'. Further, at every moment, this kind of explosion and implosion takes place, followed by a self-imposed order, for the resulting material form to be useful and beautiful. The inner dynamics of the energy and the structure of the material form are also indicated in the shastras under the title of 'Vaastu Pada Vinyasa' meaning arrangement of spaces in an order. This is the Vaastu Purusha personified in human form (Brahma purusha vidha-eva 'ब्रह्म पुरुषविध एव') and detailed in the texts, as lying coiled, as though like a baby or a serpent (vaastu naga), not only in the Earth but in every material object of the universe as also in every paramanu (minutest particle of energy- space), with which the universe is made up of. The paramanu is described by Mayan, the progenitor of 'Vaastu Vidya' as the egg or foetus of the space (விண்கரு 'Vinkaru'). The universe is therefore a tri-dimensional space, like the Earth, but replete with subtle particles of energy or energy cells. This is, of course, a short note on the big bang theory of Vaastu science, where there is not only explosion (birth), but also implosion (withdrawal or disappearance into space) occurring at every moment in the universal space.

The Vaastu texts prescribe a set of physical but significant tests for selecting good grounds in view of the fact that the physical properties of the Earth are not

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uniform throughout its surface. The Earth itself is affected by various forces of the material universe of which Earth is also a part and that affects bodies inhabiting it. Further, the study of the contours of the ground along with the flora and fauna is also one of the primary concerns of the traditional designer. The colour and texture of soil, as also its taste and odour constitute another set of qualities of the ground to be examined. Apart from this, the site where water is met with at a depth of a **'man's height with upraised hands'** known as 'Purushanjali matra', is said to be a good sign of a site for human habitation. The water-flow underneath should be clock-wise, along with the motion of the Earth.

While defining the physical characteristics and features of a good soil and site, one of the Vaastu texts gives a beautiful and succinct account in the following verse.

स्निग्धा स्थिरा सुरभि गुल्मलता सुगन्धा ।
शस्ता प्रदक्षिण जलोपेता निवास भूमी ।।

'Snigdhaa sthiraa surabhi gulmalataa sugandha
Sastaa pradakshina jalopetaa nivaasa bhumi'.

"The soil of the habitable ground should be soft and close grained (hard and well consolidated) and should be over-grown with fragrant flowers, creepers and shrubs. Further it should be of good odour, spacious in extent and of even level, as also with sub-soil-water flowing in the clockwise direction".

The evenness of the grains and compactness of the soil are tested by digging a pit of 3 hasta measure (8'.3"×8'.3"×8'.3") and refilling the pit with the excavated earth. The soil is good if a part of the earth remains after refill, bad if insufficient and satisfactory if no earth is left over after full-fill. This is a very simple test, relevant even to day.

The fertility of the soil is verified through a test, because it accounts for the fertility or prosperity of human life inhabiting the particular area. This is ascertained by sowing seeds on the proposed site and observing the duration of germination, ranging from three to seven days.

And above all, and related to ploughing and seeding the Earth, there is a very sensitive test for ascertaining the quality of the ambience prevailing in the particular area to be taken over for residential purposes. For this, certain number of cows and calves along with bulls are left free on the site, over grown

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with seedlings and saplings, to move about and graze. The purpose is to ascertain the sensitivity of the soil conducive to procreational tendencies of human beings. In this context, the cows and bulls are allowed to mix with freely and their movements watched[1]. If the bulls raise affectionate and alluring sounds and run towards the cows to sexually play with, this is good. The cow in response, secretes urine and drops dung. The bull's desire for mating with the cow is explicit here and this is considered to be a very good sign, in that, it foretells affectionate and intimate relationship between the master and mistress of the house to be built on that site. The traditional concept is this. The spiritual ambience that prevails in the area accounts for such behavioural overtones.

Traditional practitioners in architecture adopt a practical way of identifying the quality of the building- site from the very sight of the vegetation that is wildly grown over there. If the leaves are of thick green colour and of dense growth, the soil is considered to be the best one for human habitation. Such a feature ensures the presence of water underneath and on that account the fertility of the soil recognised. The semi green shade of the leaves is an index to the mediocracy of the soil, while the paleness, the poor one.

The establishment and expansion of large cities, towns and villages have been greatly influenced by the availability of water sources, either from underground means or from surface supply, like rivers and lakes. Rainfed soil, if periodical, and in requisite measure, is also good for human habitats. In the tropical countries, subsoil water, available at a depth of 'Purushanjali matra', is said to promote healthiness of the surroundings, leading to the physical welfare of the inhabitants.

As trees and plants are also living organisms, they too require water for their existence and physical growth. Animals and birds too flock to the terrain depending upon water sources. The movement of water current in the clock wise direction is a good indication of

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1 संहृष्ट वृषनादेश्च निर्धितकलुषी कृतं। वत्स वक्त्रच्युतैः फेनैः संस्कृतं प्रस्नवैरपि॥
स्नातं गोमूत्र सेवैश्च गोपुरीषैः सलेपनं। च्युतरोमन्यनोत्गारैः गोष्पदैः
कृत कौतुकम्। गोगन्धेन समाविष्टं पुण्यतोयैश्शुभं पुनः from Mayamata Vastu Shastra, Chapter 4.
"It is evident that cows provide eco-friendliness in human settlements".

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perennial supply. The normal test for identification is to dig a pit of 3 feet deep, fill it with water, throw flowers on the surface and watch whether they move in the clockwise direction or otherwise.

The toxic nature of the soil is tested by a simple method of floating a plate with four wicks of light or burning candles. If all the threads are burning, the soil is taken as the best. If two alone remain burning, it is middling in quality and if all the four are extinguished, the site should be rejected as unfit for human habitation. The meaning behind this is to diagnose whether the soil below the proposed site as well as around the site are of fragrant smell or of foul smell and if so to what extent. Obnoxious air or gaseous substances issuing out of the soil cause negative effects on the human system and affects in the long run the lung of the dwellers adversely. So this test, though looking very simple, is of great significance and the practising shilpis go through such tests very carefully. This is called wick test.

On this account, living near big factories that would pollute the air is objected to by the shastras. For the same reason the factories of shilpis were kept away from the towns or cities in the olden days and for reasons of sanctivity and sacredness, the temple complexes are recommended to be located in far flung areas such as mountain tops, mountain slopes, forests, green fields, river banks and sea shores as also in the less crowded parts of large cities and towns founded on healthy soil. Marshy lands, slushy sites, clayey soils are disallowed by the shastras. In this context it is to be observed that no improvement of defective soil or site is recommended in the shastras. On the contrary, outright rejection is advised. This is because that such an improvement would be partial and of temporary nature and not a permanent solution.

Lands containing skulls of animals and human beings, as also other impurities such as broken stones, tiles, scraps of iron, nails, spikes, hair, husks, charred wood or charcoal, lignite and holes giving room for white ants, serpents, rats and frogs are stoutly objected to by the shastras. They are considered to be cancerous. This aspect of keeping the Earth free from impurities is covered very elaborately by Vaastu sciences under the title of

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[1]**'Bhu salya'[1]** or **'Bhugarbha'**. The concept in this context is that the life-long association with bad earth is harmful to physical and spiritual wellbeing.

Another point that merits our attention and that should be kept in mind is, that once an area is selected for human habitation, it is not necessary that for each and every building to be erected on that area one should go through such tests.

For large temple complexes, towns and villages as also industrial estates, the natural level of the ground is required to be studied. This aspect is known as 'declivity of the ground' - 'plavanam' in Sanskrit, 'ஏற்ற இறக்கம்' 'etra erakkam' in Tamil. In general, the ground with its southern and western parts raised and inclined respectively towards north and east is recommended. This ensures flow of under ground water in the clockwise direction and throughout the year. This trait is noticeable in the temple building with the water chute (nalam/pranalam) directed either to north or east with respect to the orientation (aspect) of the building. Hence it is invariably recommended by the traditional sciences that the well should be dug in the north east quarter or corner of the building site. This is signified by the concept that the Vaastu purusha lies on the ground with his head at north east quarter. The energy starts moving from this point of north-east of an enclosed space within which the outside energy is contained, as water in a cup. Hence in the shastras, we find a common but a significant rule that every village, town or building plot, to be vibrant, should be enclosed by a compound wall. There are archaeological evidences to the fact that towns and cities of the olden days have had this enclosure. But to day we do not have walls built all around towns and villages but invariably we find them around temple complexes and residential plots. Enclosure walls are very important in the case of, at least, residential buildings, the significance of which will be elaborated when we discuss on town and village layouts. The Earth either in part or whole moves clock-wise as 'Vaastu purusha' the earthly energy is stated logically, to be moving from left to right like the arms of the clock. For this

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1 Any foreign material other than soil is 'bhu salya' or 'bhu garbha' where 'bhu' is earth and 'salya' or 'garbha' the material held in the 'womb' of the Earth.

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reason every plot of land demarcated into a habitable Vaastu, moves clockwise with its axis situated at the centre of the built space. This axis, though invisible to physical eyes does exit in as much as there runs an axis or thread of consciousness in the human body from the centre of the skull, down below and between legs, which is technically called Brahma sutra, ब्रह्म सूत्र or Kaaya madhya sutra काय मध्य सूत्र in Sanskrit and ஒளி நூல் 'olli nool' in Tamil. The word ஒளி olli as already discussed means உணர்வு, தன் உணர்வு (awareness) in Tamil. This thread of consciousness is also established very consciously in a house, built according to Vaastu principles. Just as the plumb of the building technology ensures stability to the structure, this thread or plumb of consciousness introduced in a built space ensures not only stability, but mobility (growth) of the energy enclosed, and it is extended to the dwellers to experience harmony and develop physically and spiritually.

Let us now go into details with respect to the physical properties of the Earth, as given in the Vaastu texts.

(1) आकार Contours
(2) वर्ण Colour
(3) गन्ध Odour
(4) रूप Features
(5) शब्द Sound
(6) रस Taste
(7) स्पृश Tactile sense
(8) प्लवन Declivity of the ground.

It is rare to meet with level ground (शस्ता) on the Earth. If so, it is to be taken as very good for human habitation or else the site should be levelled up to spirit and plumb. The shastras have examined the occurrence of slopes in nature and their effects on human life and codified them as detailed below.

Slopes of ground : If the ground is elevated on the south and the west with slopes on the north and east, it is good for human habitat. Every particle of Earth is considered to be energy, the heaps of energy being physically balanced in such cases. If otherwise, they are to be filled up and counter balance ensured. In all cases, a well balanced ground is said to be ideal. In the Vaastu texts, this aspect of unevenness and rectification are elaborately dealt with, indicating positive benefits or negative effects therefrom, as the case may be.

Let me repeat and go further into details of slopes and their bad and good effects on human habitat.

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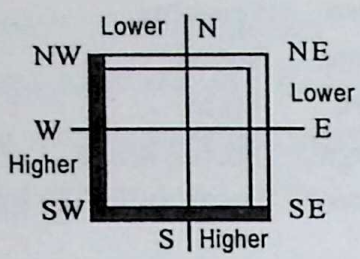
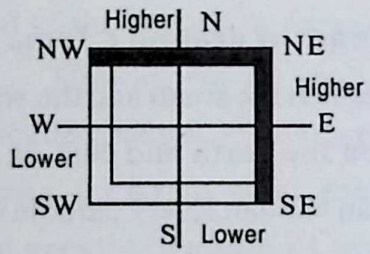


1.) West elevated - sloping towards east - promotes material growth and prosperity. South elevated - sloping towards north - brings in wealth.

पूर्वप्लवा वृद्धिकरी, उत्तरा धनदा स्मृता
'poorva plavaa vriddhi kari, uttaraa dhanadaa smritaa'.



2.) East elevated - sloping towards west - loss of wealth. North elevated - sloping towards south - loss of inhabitants.

अर्थक्षयकरीं विद्यात् पश्चिमप्लवनां ततः
दक्षिणप्लवना पृथ्वी नराणां मृदिता भवेत्
'arthakshayakariim vidyaat
paschima plavanaam tataha
dakshina plavanaa prithvi
naraanaam mriditaa bhavet'.

There are certain names indicated in the texts with respect to the 'high' and 'low' levels of ground situations. For instance, the ground with high-west and low-east is called **गोवीथी** 'go veethi'. Similarly the ground with high-east and low-west is **जलवीथी** 'jala veethi', high-north and low south - **यमवीथी** 'yama veethi' and high south and low north **गजवीथी** 'gaja veethi'.

वारुणोच्चासमायुक्ता नीचमाहेन्द्र सम्युता
गोवीथिरिति संज्ञेया
ऐन्द्रोच्चा नीच वारुणा जलवीथिरिति प्रोक्ता
सोमोच्चा यमनीचा च यमवीथिरिति कथ्यते।
यमोच्चा सोमनीचाच गजवीथीति कथ्यते।।

'vaarunochchaa samaayukta niicha
maahendra samyuta goveethiriti
samjneya
aindrochcha niicha vaarunaa
jalaveethiriti proktaa
somochcha yamaniichaa cha yama
veethiriti kathyate
yamochchaa soma niichaacha
gajaveethiiti kathyate'.

Goveethi and Gajaveethi are good for human beings. The uniqueness of Vaastu science is such that it foretells the good or bad effects of the environment, on the dweller of the space, keeping in view the subtle qualities of the Earth. This is actually based on the concept of 'living in harmony with subtle nature'. This is further related to the quality of paramanu sized energy which is called Karu (foetus) in Tamil. This karu at its primal level is a subtle substance, the quality of which is studied by Vaastu experts like Mayan and incorporated in the science of building. This building, therefore, is anchored on

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the மண்கரு (mankaru) sperm of the Earth and the building is considered as a plant, sprout into existence, being always nourished by the energy of the Earth. It is inferred that such a subtle aspect of foetus should be known to Ayur Veda. So it must be remembered that we are dealing with subtle energy not dead earth or soil.

There are a few more points worthy of being noted in respect of the declivity of the ground to be examined before being taken-up for building activities. So far, the declivity was examined with respect to cardinal lines. Now, diagonal lines, from one corner to the opposite corner, are taken into consideration and their positive or negative effects are pronounced.

The ground, with NE raised and sloping towards SW, is called भूतवीथी 'bhoota veethi', and it is bad.

SE elevated, sloping towards NW - naga veethi नागवीथी - good

NW elevated, sloping towards SE - vaishwaanariim वैश्वानरीं - bad

SW elevated, sloping towards NE - dhana veethi धनवीथी - good.

ईशोच्चं निर्ऋतिनीचं भूतलं भूतवीथिकम् ।
आग्नेयोच्चं वायुनीचं नागवीथी प्रशस्यते ।।
वायूच्चं अग्निनीचं यद् वीथीं वैश्वानरीं विदुः।
निर्ऋत्युच्चं ईशनीचं धनवीथीत्युदाहृतम् ।।

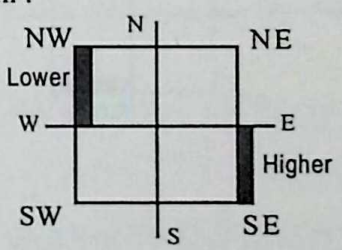
'esochcham niriti neecham bhutalam
bhuta veethikam
agneyochcham vaayu niicham
naagaveethi prasasyate
vayoochcham agniniicham yad veethim
vaiswanariim viduhu
nirtyuchcham esa niicham dhana
veetheetyudaahritam'.

Next comes the ground with rise and fall occurring in between directional lines.

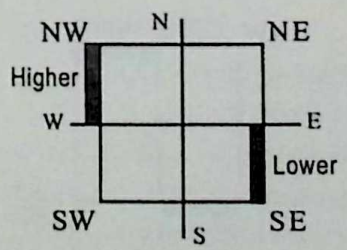
If SE and E are elevated and the W and NW are lowlying, this ground does good to human beings.

इन्द्राग्न्यन्तरमुच्चं स्यान्नीचं वरुणवातयोः
नराणां कुरुते शुभम्

'indraagnyantaramuchcham
syaanneecham
varuna vaatayoha naraanaam kurute
shubham'.



If this plot, in between East and SE is low while the portion in between West and NW is high, it is said to create कलह (commotion) and वैर (enmity). The name of the Vaastu is अपथं (disorder).



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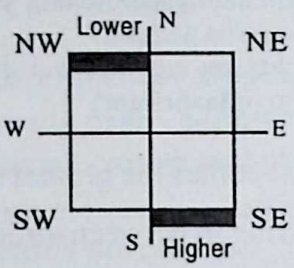
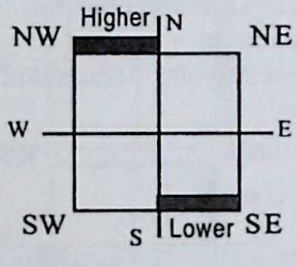
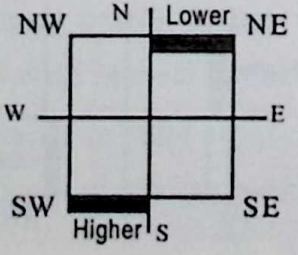
If South and SE are elevated and North and NW low lying, such a situation, would bring name and fame in all activities. (प्रशस्तं सर्व कर्मणाम्)



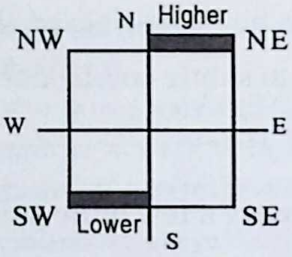
The plot with South and SE is low lying while the North and NW are elevated, it is called रोगकृत् meaning creator of diseases.



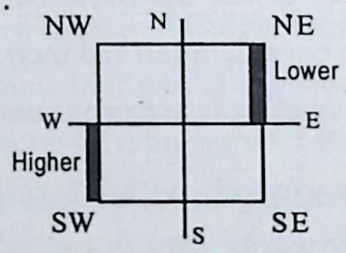
If North and NE are low while the SW and South are high, the family of the indweller will multiply and the members will have long life. (प्रशस्तं कुलवर्धनम्). Added to this, such a plot is blessed with long life (दीर्घायुर्नाम तद्वास्तु).



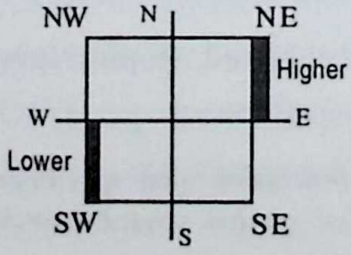
The building plot raised from North to NE and low from South to SW, it is named as अर्गल (bolt/obstruction) and the effect is ब्रह्महत्यादि नाशकं (Brahma hatyam), the 'annihilation' of having murdered a Brahmajnani.



The ground, with depression at NE and East and high at West and SW, it brings welfare and comfort to the occupant. This plot is called पुण्यकं meaning 'sacred'.



The effect of the building site with its stretch from East to NE elevated and that of West to SW low lying, is कुलनाशं, meaning decay of family. The name of the Vaastu is श्मशानं - graveyard.



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Sl.No.	Higher land area	Lower land area	Effects
1.	South East, East	West, North West	Good - शुभम्
2.	West, North West	South East, East	Disorder - अपथं
3.	South, South East	North, North West	Brings name and fame -प्रशस्तं सर्व कर्मणाम्
4.	North, North West	South, South East	Generates diseases -रोगकृत
5.	South West, South	North, North East	Longivity of life span - दीर्घायुर्नाम
6.	North, North East	South West, South	Brahma hatti dosha the effect of having murdered a Brahmajnani - ब्रह्महत्यादि नाशकं
7.	West, South West	North East, East	Sacred -पुण्यकं
8.	North, North East	West, South West	Graveyard - श्मशानं

In addition to these situations, there are still more details, but not brought into this text, since they are too minor and intricate. Anyone interested may go into Vaastu Vidya or Manasara.

But in actual practice, what are given earlier are found more than enough. The usual practice is that the ground should be levelled up or levelled down as required by the shastras. This is actually to be applied to the situation of the ground in general. But the actual building should be erected on a site perfectly levelled up to the 'spirit', but only the general surrounding space of the plot, is discussed so far.

There is a sloka in a text called Vaastu Vidya, which can be memorized . by practitioners. This gives a summary or a short-cut to important points to remember and apply.

इन्द्रोन्नतं पुत्रनाशं वह्नयुन्नतं अथ अर्थदम्
अग्नि नीचो ऽर्थनाशः स्याद् याम्योन्नतमरोगकृत्
निर्ऋत्युच्चं श्रियोलाभं पुत्रदं वरुणोन्नतम्
वायून्नतं द्रव्यनाशं सौम्योन्नतमथोगदः
ईशानोच्चं महाक्लेशं वास्तुविद्यादिति क्रमात्

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'Indronnatam putranaasam
vahniyunnatham atha arthadam
agni niicho arthanaasaha syaad
yaamyonnata maroga krit
nairityuchcham sriyolaabham putradam
varunonnatam
vaayoonnatam dravyanaasam
soumyonnata mathogadah
esaanochcham maha khlesham vaastu
vidyaditi kramaat'.

The plot with its

East side	high -	पुत्रनाशं	death of children
South east	high -	अर्थदं	brings in wealth
South east	low -	अर्थनाशः	loss of wealth
South	high -	अरोगकृत्	free from illness
South west	high -	श्रियोलाभं	brings in wealth
West	high -	पुत्रदम्	blessed with progeny
North west	high -	द्रव्यनाशं	loss of property
North	high -	अयोगदः	generates diseases
North east	high -	महाक्लेशं	excessive grief.

There is also an indication of high or low grounds with respect to individual's professional or occupational status.

For individuals involved in physical labour - declivity to be on the West, commercial activities - declivity to be on the South, political leaders and rulers - declivity to be on the East, intellectuals and professionals like teachers, lawyers, doctors, scientists - declivity to be on the North.

There is a general description of a building site in Mayamata and Manasara, declared to be ideal for human and divine habitation. At the outset, Brahma rishi Maya recommends square or rectangular plot as ideal for dwelling houses for humans and the divines. Added to that the ground should have rise on the west or the south side of the plot under examination. Mayan says,

देवानां च नराणांच चतुरश्रायातास्मृता ।
वस्त्वाकृतिरनिन्द्या साऽवाक् प्रत्यक् दिक्
समुन्नता ।।

'devaanam cha naraanaamcha
chaturasraayathaa smritaa
vastvaakritiranindyaa saavak pratyak
diksamunnathaa'.

Manasara says,

दक्षिणे पश्चिमे चैव चोन्नते चतुरश्रकम् ।
तद्वस्तु जायतेवाऽपि देवानां मनुजः क्रमात् ।।

'dakshine paschime chaiva chonnate
chaturasrakam
tatvastu jaayate vaapi devaanaam manuja
kramaat'.

It may be noted that those two authorities recommend square or rectangular plots as suitable for habitation of human beings or for divine abodes. Further, they are holding one and the same view with respect to declivity of the ground.

As regards other aspects of the soil, there is a brief note in Mayamata Vastu Shastra which worths mention here.

The sound of the ground, when tapped with an instrument (preferably

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spade or pickaxe) is that of the **horse, elephant, bamboo, veena, sea or dundubi** (percussion instrument) it is considered suitable for dwelling houses.

हयेभ वेणु वीणाब्धि दुन्दुभि स्वन संम्युता।

'hayebha venu veenaabdhi dundubhi svanasamyutaa'.

As regards the odour of the soil, it is said that it should possess the odour of Punnai புன்னை, Jatimullai ஜாதிமுல்லை, lotus, grains and paadiri flower பாதிரிப்பூ. The land, under examination, should have the smell of the cow and fertile enough, for the seeds to germinate and grow fast.

पुन्नाग जाति पुष्पाब्ज धान्य पाटल गन्धकैः।
पशुगन्धसमा श्रेष्टा सर्वबीजप्ररोहिणी॥

'punnaagajaati pushpaabja dhaanya paatala gandhakai
pasu gandhà samaa sreshtaa sarva biija prarohini'.

The other qualities of the good ground are that the soil should have uniform colour, close grained and hard, viscous and soft when touched with fingers. Such a ground, with the growth of trees and plants such as Bilva (வில்வம்), Vembu (neem), nirgundi (நொச்சில் nochil), puitia (மருக்காரை marukkarai), saptaparnaka (ஏழிலைப் பாலை), sahakaara (மாமரம் mango) is said to be good if found or planted on the ground. The ground should be of even level.

एकवर्णा घना स्निग्धा सुखसंस्पर्शनान्विता।
बिल्वो निम्बश्च निर्गुण्डी पिण्डितस्सप्तपर्णकः
सहकारश्च षद्वृक्षैरारूढा या समस्थला

'eka varnaa ghanaa snigdhaa sukha samsparsanaanvitaa
bilvo nimbascha nirgundi pinditas saptaparnakaha'.
saha kaarascha shad vrikshai raaruudaayaa samasthalaa'.

The land, possessing the colours such as white, red, yellow, black or grey and tastes such as bitter (**तिक्ता** thikthaa கசப்பு), acrid (**कटुका** katukaa உவர்ப்பு), astrigent (**कषाष** kashaaya துவர்ப்பு), saline (**लवणा** lavanaa கரிப்பு), sour (**आम्लका** aamlakaa புளிப்பு), sweet (**मधुरा** madhuraa இனிப்பு), such a site brings in wealth and prosperity, says Maya.

श्वेता रक्ताच पीताच कृष्णा कापोतसन्निभा
तिक्ता च क्टुकाचैव कषायलवणांलका
मधुरा षद्रसोपेता सर्व सम्पत्करीधरा।

'swetaa raktaacha piitaacha krishnaa kaapota sannibhaa
tiktaa cha katukaa chaiva kaashaya lavanaamlaka
madhura shad rasopeta sarva sampat karii dharaa'.

Land possessing the smell of curd, ghee, honey, oil, blood, corpse, fish and birds are rejected by Vaastu shastras in view of negative effects that they would cause on the health of the inhabitants.

दध्याऽज्य मधुगन्धा च तैलासृग्गन्धिकाचया।
शवमीन पक्षिगन्धा सा धरा निन्दिता बरैः॥

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'dhdhyaajya madhu gandhaa cha tailaa
sriggandhikaa cha yaa
sava meena pakshi gandhaa sa dharaa
ninditaa varaiha'.

Speaking about water sources, Mayan says that water should be reached at a depth of 7'.6", which is the measure of a man with upraised hand (purushaanjali maatra) with flow of water in the clockwise direction.

प्रदक्षिणोदकवदी .....
पुरुषाञ्जलि मात्रेतु दृष्टतोयामनोरमा

'pradakshinodaka vadii .....
purushaanjali maatreytu drishtatoyaa
manoramaa'.

Apart from the positive effects accruing out of the good qualities of the Earth, there are certain negative aspects with respect to **location** of the building sites as well as their **shapes**[1].

The location of buildings should not be close to the public institutions like theatres, chaityas (Buddhist monastery etc.) palaces of kings, temples and garden of Shiva temple.

Further, the sites where thorny trees grow should be avoided. The sites close to the grave yard, tannery etc. should also be rejected.

Shape of building sites such as
Circular ○
Triangular △
Polygonal, with irregular sides ⬡

Vajrayudha - meaning the serpentine streak of lightning.
Curved like the back of tortoise.
Ground with a rise in the centre.
Ground looking like a kettle
drawn should be avoided.

Shapes that of bird, fish, drum, willow, conch, chameleon, house-lizard, monkey, pig, wild python, chisel, pickaxe, conch and cat are to be avoided.

The location of the building at a place, not easily accessible, or at the junction of 2,3 and 4 roads or at the end of a road or street is to be avoided.

Places where heavy and giant trees, teak and banyan (ஆல்) trees grow, should not be selected for human habitation.

Places where serpents, white ants and worms thrive, should be avoided.

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[1] Study of shapes is yet to be scientifically carried out and their impact on human life tested. Colours and their impact on human mind have also to be studied by modern science. I have heard that a good start has already been made somewhere in the west. There are too many aspects to be taken into laboratorical considerations. One such is the Earth, its qualities and its influence on human existence.

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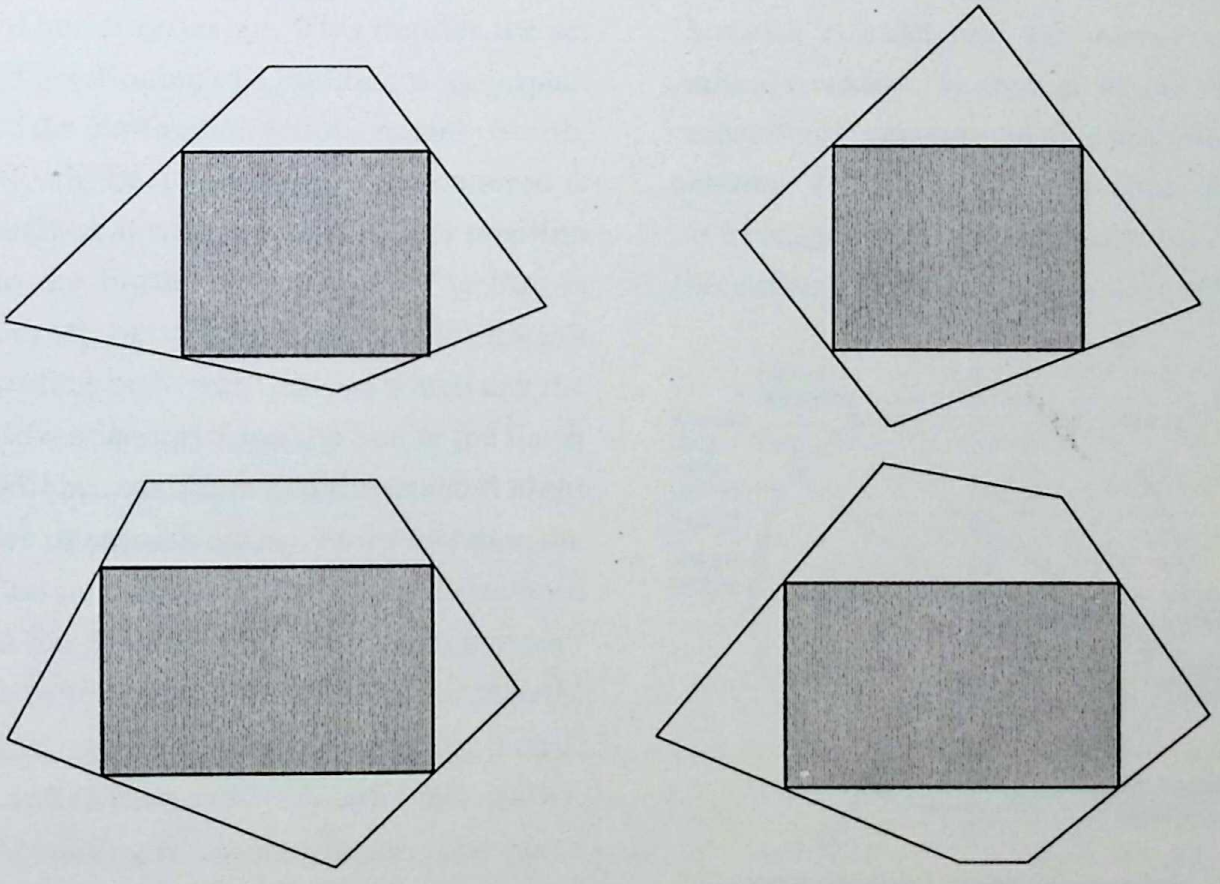
What is basically to be noted in this context is that the energy waves emanating from the irregular and bad spaces or shapes would cause disharmony with the inner waves of the occupant of the building. In such cases, the boundary should be demarcated either into a square or rectangle, leaving the rest of the spaces around, unbuilt. Even the fencing or enclosure wall should be in a regular shape, to avoid negative effects of irregular forms. Modern science should take up this subject of irregular shapes and their impact on human psyche studied for bringing better life to human beings.

The psychical reactions to good and bad physical phenomena are noticeable in the list of forms acceptable and rejectable. It is indeed the spirit that accepts or favourably responds to order in the material world. It is its nature as it is 'order incarnate'. The Vaastu Vedins call it 'Vaastu dharma'. Anything disorderly is therefore alien to its nature. Repetetive occurrence or perpetual association with any kind of disorder is rejected and thus psychical disturbances avoided. The Vaastu shastras, recommend therefore a good number of precautionery measures



PICTURES OF SITE CORRECTION TECHNIQUES

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aimed at ensuring psychical peace and pleasure.

In fine, the selection of site surrounded by healthy environment of physical and spiritual nature, is the key note of Vaastu technology. The qualities of nature enumerated in the early discussions, are related to the spirit and spiritual wellbeing and the material forms and associate physical properties as related to physical welfare of human beings. Hence certain Vaastu texts are found to deal more elaborately with these twin aspects of Vastu and Vaastu.

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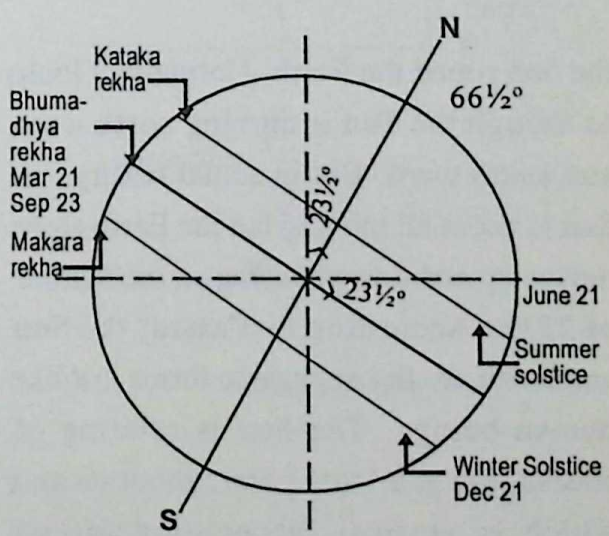
ORIENTATION OF BUILDINGS, CITIES AND VILLAGES

Orientation ensures spatial harmony of building with the Earth. Orientation of cities and towns are of paramount importance in Indian Vaastu townplanning - Orientation of residential, religious, educational and commercial spaces are of equal importance - Non adherence to rules of orientation would disturb harmonious life with Nature.

Orientation is an important aspect of building design. This implies the act of positioning of a building with respect to the cardinal directions namely South, North, East and West. This concept is arrived at with respect to Sun's position to the Earth's movement. The Sun is directly opposite and closer to the Earth's surface on March 21st, on which day the flow of energy from the Sun to the Earth will be maximum and the day and night are of equal lengths. From that day, the Sun moves upward and later downward at fixed intervals. The upward movement is called **'uttarayana'** (Northward path) and that of the downward trend, **'dakshinayana'** (Southward path). According to Vaastu science, it points to the two latitudinal extremities of Sun's movement. The upper limit is called **'kataka rekha'** and the lower one, **'makara rekha'**. In English we call them respectively, **summer solstice** and **winter solstice**. The Sun reaches the upper limit on 21st June and the lower one on 21st December. The equatorial line is called



ROTATION AND MOVEMENT OF THE EARTH

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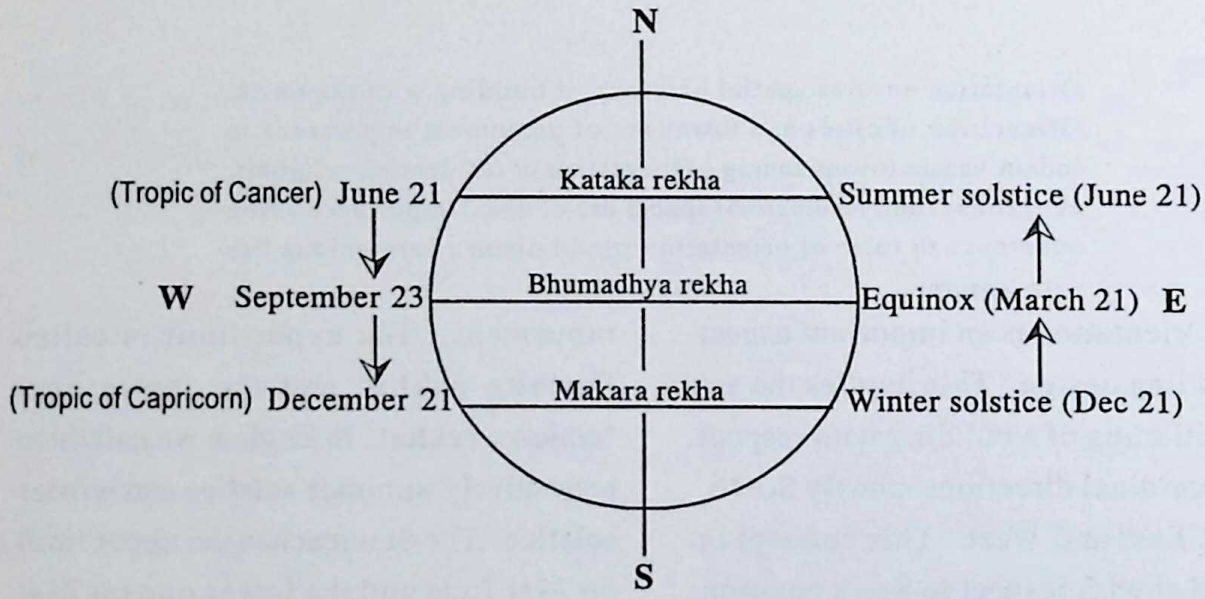
'bhumadhya rekha' and the time taken by the Sun to cross this line is termed as equinox. The Sun touches the equator again on 23rd September, during its downward movement. Total time taken from March 21 to September 23 is 6 months. This is the period of Summer. The Earth moves round the Sun, but not so powerful that it attracts the celestial bodies like Earth into its range or field. The Earth is inclined and because of this inclination on one side, it gets displaced and undergoes a forward movement, in addition to its self- spin. This accounts for the movement of the Earth around the Sun.



APPARENT MOVEMENT OF THE SUN

the Sun round the Earth. Normally it looks as though the Sun is moving north ward and south ward. But in actual reality, the Sun is not at all moving but the Earth alone moves up and down causing an inclination of 23½°. According to Vaastu, the Sun and Earth are living organic forms just like human beings. The Sun is rotating of course, but at a fixed point, about its axis which is vertical, accounting for its fixity. The energy contained in the Sun is

The Vaastu science attaches great importance to the basic line of demarcation by which the sphere gets separated into upper and lower hemispheres. This line of demarcation is called equator where the Earth is not only closer to the Sun but is at right angle to Sun's axis. This horizontal line running east-west of the Earth is technically called **'suddhapraachee'** meaning **'true east'**.

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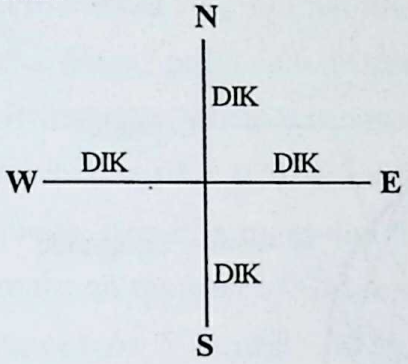
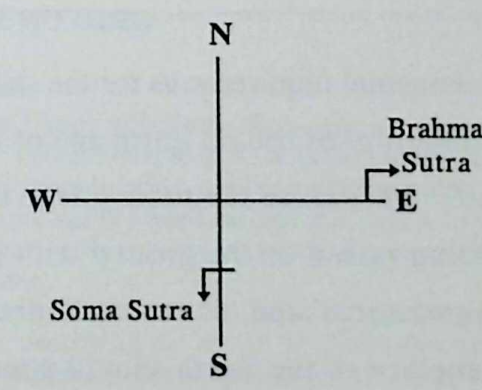
And the lines drawn perpendicular to this true east-west are 'true north' and 'true south'. These are the four basic directions more commonly known as cardinal directions.



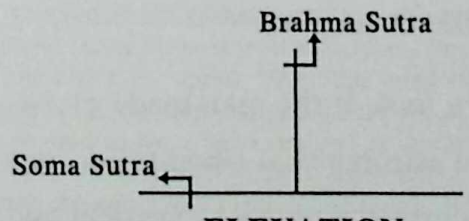
CARDINAL DIRECTIONS

The lines of east and west as also north and south, though drawn from end to end, are considered as lines emanating from the inner centre of the Earth. These directional lines in another sense are lines or conduits by which the energy remaining concentrated at the centre of the Earth flow out and spread all over the Earth. They are also lines of absorption of solar, lunar and stellar energies. Apart from the energies emanating from celestial bodies, and their impact on human life, the benefit of the space-energy is perpetual, abundant and of paramount importance. All planets including the Earth are suspended or soaked in the ocean of space, which is the source or repository of energy that sustains all embodied energies including man and other animate beings that live on the Earth. This is the vital energy that Vaastu shastra is keeping in mind when it formulates rules and codes for designing buildings.

The line emanating from the centre of the Earth and passing along the equator and also parallel to that, is **'Prachee Sutra'** meaning the east line. And the line extended from this centre as far as the rear side of the Earth is called **'Pradeechi Sutra'** meaning the 'west line'. These two lines forming thus a straight line is technically designated as **'Brahma Sutra'** meaning **'thread of energy'** or **'thread of light'**. And the line drawn from the centre and



PLAN



ELEVATION

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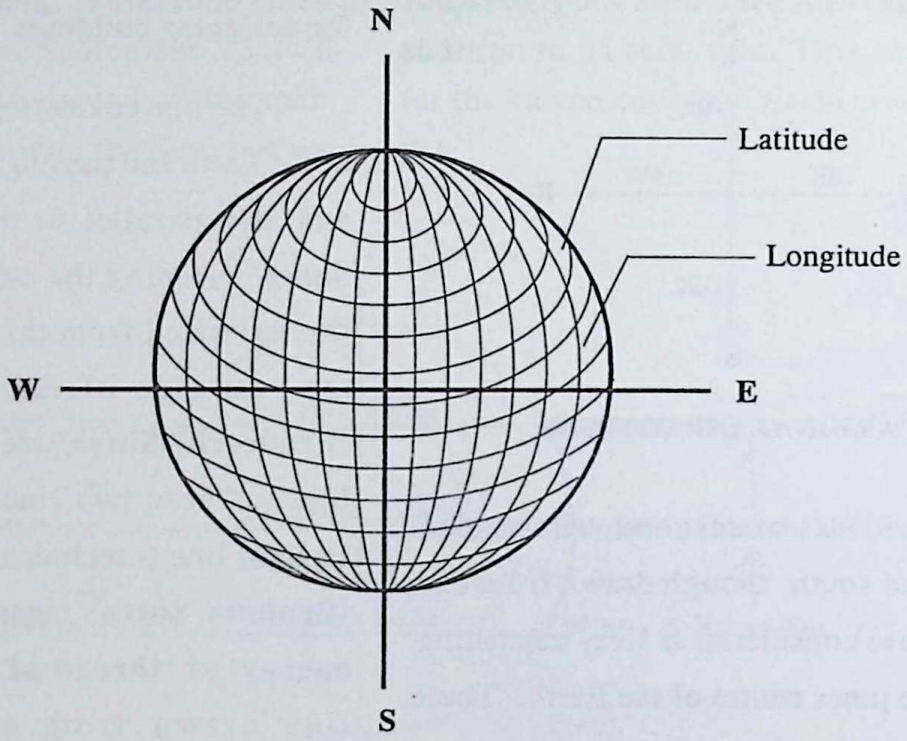
perpendicular to this 'brahma sutra' is called **Soma Sutra** so far as the horizontal plan of the two lines are concerned. The two lines comprising four basic directions horizontal lines marked on the surface of the sphere.

Though they are imaginary, they are



GRID ON THE EARTH'S SURFACE

are elemental requirements for the stability and mobility of life on Earth and of Earth itself. Therefore the theory is that any building raised on the ground with these 'brahma sutra' and 'soma sutra' drawn on the surface of the Earth should conform strictly to the 'brahma and soma sutras' with respect to the Earth's orientation towards the Sun.

If we look at the man-made globe, used in the astronomical laboratories, you will find certain number of vertical and very significant from the point of view of Vaastu shastra. The vertical lines are called longitudes (dirkha rekha) and horizontal lines are called latitudes (aksha rekha). Taking the plan of the Earth as circle, the circumference is divided into 360 bhaagas (degrees) each bhaaga (degree) representing a longitudinal line running from North to South pole, the space in between two lines being at uniform interval (measure). It may be noticed that the rhythm or order in the interval and corresponding space-

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measure account for an order in the life of living beings occupying the Earth's surface. Therefore these longitudinal lines are drawn and rhythmically spaced with respect to a fixed longitudinal line going through a place / point called Greenwich of the British Isle, where it is dawn of the day (say 6 a.m) for Britishers, but for us, Indians, it is 11 a.m. at that time, as we remain on the east of Greenwich by 75 degrees or 5 hours[1]. When it is midnight for Greenwich it is dawn (6 a.m.) for Fiji islands. The date line passes through Fiji islands which has the unique honour of the sunrise occurring first in the world. The shift of Fiji from Greenwich in terms of space and time are 180 degrees and 12 hours respectively. Infact, we Indians have also a longitude passing through New Delhi which is taken as the time-line of Sun-rise. This is otherwise Indian date line. The Earth takes 24 hours[2] to perform one single self spin.

Though the above discussion may look like a digression, we will be able to discern one scientific fact. It is worth noting here.

From the discussions made so far, it must be evident that these longitudes and latitudes running at right angles, create a kind of energy grid over the Earth's surface and this grid is very meaningful and significant in the context of

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1 $15^{\circ} = 1 \text{ Hour} = \frac{\pi \times 7926.57}{360} \text{ miles} = 69.2 \text{ miles}$

2 The hasta-measure (cubit) called 'Kishku', as prevalent in the Vaastu technology, from time immemorial, is 24 angulas. This is the length of the standard measure. This is equal to 2'.9" in British units. This measure of 24 angulas corresponds to 24 hours of a day, each angula being equal to one hour within the space unit of 15 degrees. Please note that time measure is expressed or turned into space measure. Is this not a global measure? Does not this measure deserve world-wide recognition and adherence? This measure is not arbitrary but related to universal time and space.
Also note that this measure of 24 angulas is mentioned by Ilango Adigal of the Tamil epic Silappathikaram, (2nd century AD) as of one muzham (முழம்) long, while describing the design of Dance-theatre of Madavi, the celebrated dancer of his times. This measure of muzham is also equal to 2'.9". This is in force till today.
Also note that it is only in Vaastu tradition that the measuring rod consists of 24 divisions with reference to Earth's self spin and orientation to the Sun. The self spin occurs on account of the vibrative quality of the material energy (Vaastu Purusha) dwelling in the Earth. Is it not the vibration of the energy, the causal element of space? This is in physical terms and yet it is sacred and of global importance. Hence it is said that at the lower end of the measuring rod there is Brahma (Kala Brahman/Viswakarman) the maker and the sustainer of subtle material form and at the other end Shiva, the space. From this it is evident that it is KAALA, the Time that causes the emanation of space. This vibration, as said elsewhere is that of the energy and hence the measure of the Kishku hasta is said to have been derived from the universal vibration. So it is a sacred unit of measure. So is it worshipped by the traditional shilpis. The vibrational measures as quantified by the Sthapatya Veda are noticeable in the Vaastu texts under the title 'manopakarana' meaning "units of measurement and instruments thereof".

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orientation. Infact, the concept of energy grid has been the ruling element of space-technology in the domain of traditional designs pertaining to Indian art and architecture.

Accordingly, there has been a practice with the Vaastu technologists to turn the layout plan, be it for a temple, house, village or town, into a grid consisting of $9 \times 9 = 81$[1] squares (a grid pattern adopted for the creation of gross material spaces or forms) and if such a grid plan is oriented to the cardinal directions or placed parallel to cardinal directions of the earthly grid, the plan of the house is said to lie exactly over the earthly grid. This establishes a kind of geometric congruency or harmony with the earthly grid[2]. If there is any distortion, deviation or deflection in the grid lines of the proposed building-grid, from that of Earth's grid, then the built space is said to be in disharmony with the earth's grid. If in perfect harmony, it is to be understood that the Earth and the house respond to each other in terms of energy-spaces. This is proper orientation. This is a vital element of design technology. Please remember that we are thus wedded to the earth and perennially exposed to the energy fuming out of the earth. To be in harmony with earth's nature is of paramount importance. If we live contrary to this natural law, we cannot escape the negative effect. Is this not science? Yes, it is the science of the subtle nature and not of the gross.

There is another layer of science concerning the concept of directional lines and formation of grid lines on the Earth's surface. There is a profound spiritual significance demanding deep study and comprehensive assimilation for application in actual practice. This is associated with the science of 'manifestation' of the Absolute Energy into

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1 In the case of large areas the grid of 9×9 will pose problems of accurate measuring. In this context every division will have to be treated as a big square which is again turned into 9×9, thereby creating minor grids of square or rectangle, as the case may be. They are actually the fractional measures of a larger grid. This may be further divided into 9×9 till we reach a house grid or layout or plot in the practical sense. So multiples and fractions are allowed in the configuration of spaces in a Village or Town. As such we have grid patterns ranging from 1×1, 2×2 ..... 8×8, 9×9 ..... 31×31 and 32×32.

2 They may be called zones.

3 Note how easy it is to create a measure by division till we reach the minutest particle of space (anu) and create or turn invisible into visible and well proportioned forms! "God geometrises and creates form without any instrument in His hands!" is the discovery of Mayan. Hence for a planner of Vastu technology only a 'divider' is required to create a well defined and aesthetical form. This is the secret of creation. Who causes the divisions? Is not the pulsation (Time) that provides the measures?

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material energy as understood by our shilpi-rishis. This aspect, though elsewhere elaborately discussed, is repeated here in view of the context being equally relevant.

Our Earth, as well as other objects of nature, according to Vaastu science, were primarily and individually an atom, filled with energy (foetus or egg/கரு, as it is rightly called), which by its own pulsation bulged out and grew into the size of what we see today in materialized spherical form (Hence all atoms are spherical in shape). Further the concept of Vaastu purusha gives us an idea of the energy dwelling in the Earth, by which account, the Earth is said to pulsate with life. This is attested by the Earth's self spin and forward movement round the Sun, though the [1]Earth is seemingly composed of dead matter, ('asat', 'jata' or 'inanimate'). In fact, nothing inanimate could exist in this universe. There is one significant scientific truth in the Vaastu text as to the quality of every object harbouring energy inside and pulsating with life. **"It is Vastu that turns into Vaastu in the universe"**. Similarly every planet and every star floating in the celestial space and all animate objects including human beings living on the surface of the Earth, did originate and do originate from an atom of energy. By virtue of the existence of this live energy in their core, they pulsate and grow into the form that each one of us has acquired during the existence on Earth.

So in the case of the Earth, the primal minutest particle of energy called 'paramanu' (परमाणु /நுண்பொருள் / nun porul / subtle substance) as recognised and incorporated in Vaastu texts, has vibrated and ultimately reached this global dimension with a diameter of 7,926.57 miles approximately. Logically and conversely, the Earth will get diminished gradually into an atom of energy, on account of the consumption of the inherent energy over the millenea. This would clue us into the concept that the energy contained in the Earth is ever active, pulsate with life and turn into waves

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[1] The Earth, at its subtle energy level is of 8x8 units. The Earth's diameter as measured by modern science is 7926.57 miles. From this 1/8 of the Earth's diameter becomes the mantle of the Earth, the top and bottom covers put together, the rest of the space inside being occupied by gaseous substances and ultimately the fire at the centre measuring 2x2 parts (Brahmasthan). The thickness of the mantle (soil part) on one side of the Earth is 495.41 miles. Please check with the geological findings.

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of energy from within. All these occur and emanate from the centre of the Earth and spread themselves over the Earth in terms of energy-rays or energy lines.

These energy lines spread themselves all over the Earth, in a grid pattern. This is another aspect of the dynamics of the inherent energy. This is the pattern, as already seen, that the Vaastu Shastras prescribe for the lay-out of house-building. For introducing a new concept and for you to comprehend it much better, I am repeating in this context, with slight modification in the tone. If such a house layout is made to rest on the Earth's grid without any deviation or deflection, it is said, that space-wise there is perfect harmony between the built space and the earthly space. This spatial harmony is of scientific significance. This leads us further into another concept of harmony resulting out of a phenomenon of two-equally-pitched-sound-spaces in the domain of music. This is to say that a kind of musical harmony[1] is also established by which, man derives the benefit of living with musical ambience in the built space all through his life. This is said to cause spiritual tranquility leading to physical and spiritual growth and spiritual wellbeing.

The modern science with the help of very sensitive instruments has discovered the existence of luminous grids over the surface of the earth. One German Scientist, Dr.Ernst Hartmann by name, has discovered this unique phenomenon. He has also identified the application of the grid system in the ancient city planning and building designs in his own continent. He speaks quite a lot about the spiritual benefits that such a system of planning would confer upon the inhabitants.

In March '95, I had been to one of the cities of Maayan of Mexico called Guatemala which is popularly known for the grid system of streets and roads designed after the tradition of the Maayan, who originated such a design culture in the distant land of Central America about 5000 years ago[2]. I was taken to various monumental sites in the Maayan land where I was able to measure and discover

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1 Musical space and Visual space are qualitatively and quantitatively same.

2 Some scholars push the date as far as 10,000 B.C.

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the grid system as adopted in the house designs as also in the design of a town. I also discovered the extension of the grid system to the design of the pyramids.

And above all, I discovered the Vaastu system of measuring yard called 'Kishku Hasta' as applied to building design in an area calledKUSHKU[1]. At top of all, there is an old drawing of the city of Mexico prepared by the Spanish before destruction, showing the grid system adopted in the design of the city of Mexico.This was designed to accommodate 20 million citizens, with all facilities. The design of cities and villages in the pattern of a grid are authenticated in the Indian Vaastu shastras right from Mayamata of Mayan down to Shilpa ratna of Sri Kumara. All these discoveries helped me to come to a firm conclusion that the Maayan of Mexico and Mayan of India were one and the same person. What is equally significant in this context is that what is contained in Mayamata Vastu shastra authored by Indian Mayan in respect of modulated house layouts, are found in actual application in the local house forms in the land of the Maayas.

There is a literary reference in the ancient Tamil work called Puranaanuru புறநானூறு to the existence of a vast land called Tenpanai nadu (a land of palmyra trees) divided into a grid of $7 \times 7 = 49$ minor territories, each territory being kept under the rule of a chieftain called Naadar[2] and by drawing from each of the territory a scholar, there emerged a group of 49 scholars to be the members of a literary research academy called Tamil Academy, headed by the king by name Nilantaru Thiruvilpandyan (நிலந்தரு திருவில் பாண்டியன்). This attests to the prevalence of the grid system of country-planning in the remote past, in the southern most part of India and is a testimony to the scientific way of political administration prevalent in the distant past. This would clue us further into the antiquity of the Mayonic system of city and village planning, and on that account into the very antiquity of the Vaastu-shilpa tradition itself.

There is another point of reference

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1 It is my inference that the name of the village might have beenKISHKU. The present name asKUSHKU might be the corrupt form. I invite the attention of the linguists to probe into the origin and etimology of KUSHKU.

2 The word Naadaar literally means ruler.

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to the grid system adopted in the ancient days in the West. The good old city of Babylon with a river running across the centre was of a square-layout measuring 25 × 25 = 625 squares. It is said that it was as big as today's London. This type of 25 × 25 squares is also according to Maya's Vaastu Purusha mandala. This grid is called Viswesam, in the existing Maya's text. This, I believe, will attest to the world-wide acceptance and application of grid system in city planning in the remote past. The benefits accruing out of this grid system will occur only if the layout of the building enjoys proper orientation. In this context, it is to be noted that our temple buildings and temple complexes still preserve the square or rectangular grid system that accounts for the spiritual ambience prevailing there and peace experienced by the temple goers, over the centuries.

While speaking about the four cardinal directions, I made mention of the concept of true east-west line called Suddha praachee. In this context I would like to draw your attention to another east called Esapraachee which simply means a line deflected towards North East point. What is interesting here is, that certain benefits are also attributed to these two east lines - Suddha praachee and Esapraachee.

Earlier it was stated that the houses or any built space should not face diagonal directions such as North east, South east, South west and North west. They are said to bring negative effects on the dweller. These diagonal lines are assessed to be more vital than the cardinal ones, the disturbance of which would cause very bad effect on human system. The diagonal directions are stated to be the Eda and Pingala nadis of the live cell (egg) that grows later into animate material objects of the world. [1]**On the pattern of this primary cell the houses are designed and the flow of energies within the cell is implicated in the building grid expressed in terms of pillars and walls, arranged in a particular order.** And it is also stated that the house building

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1 The primary cell is Paramanu (energy particle). This is also called 'Bindu' (particle) and 'Garbha' (foetus). In Tamil it is கரு karu (foetus). Hence the main sanctum is called கரு அறை karu arai in Tamil tradition and in Sanskrit Garbhagruham. Agama Shastra would call this Bindu Griha. Is this not science? This is the science of India called Vaastu science.

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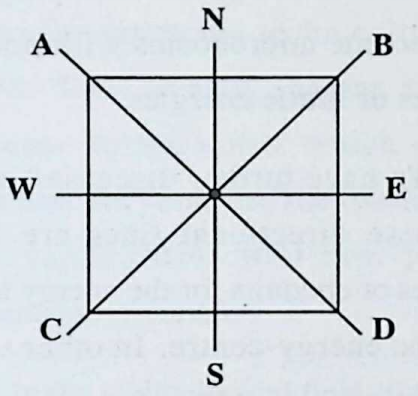
is animated with energetic space enclosed therein. Hence the restriction or tabo.

The cardinal directions are



AD = Idaa Naadi
CB = Pingala Naadi
NS = Sushumna Naadi[1]

determined in the tradition, from the shadow cast on a level ground, on which a circle is drawn and a gnomon erected at the centre. The shadows so cast on the ground touch the periphery of the circle, one in the morning and another in the evening. The points touching the rim are called 'bindus', the joining of which will turn into a straight line indicating the direction at a particular day of the month, which would be brought to true east, by corrections to be carried out numerically with respect to the month under examination. On the true east-west line, a perpendicular is drawn to arrive at the North-South direction.

In this tradition, though magnet is known, it is not used for determination of cardinal directions for Vaastu purposes, and if used, a correction is made in actual practice.

The rule of orientation prescribed for a house building is applicable to village and city layouts. As a corollary, this is applicable for factories and other public structures like temple, library, college, university, tank and reservoir.

In the technology of Indian architecture, one would find the use of a peculiar term namely 'YONI' which needs a little bit of discussion at this context. This would be again dealt with extensively under a separate chapter. We have already seen that every material object or a built space has got its own directions with respect to the Sun namely East, South-east, South, South-west, West, North-west, North, North-east. These directional points are denoted by certain symbols signifying specific qualities. They are respectively called, from east to north-east, in the clockwise direction

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1 This Sushumna will change with respect to orientation of the entrance of the house or village or city.

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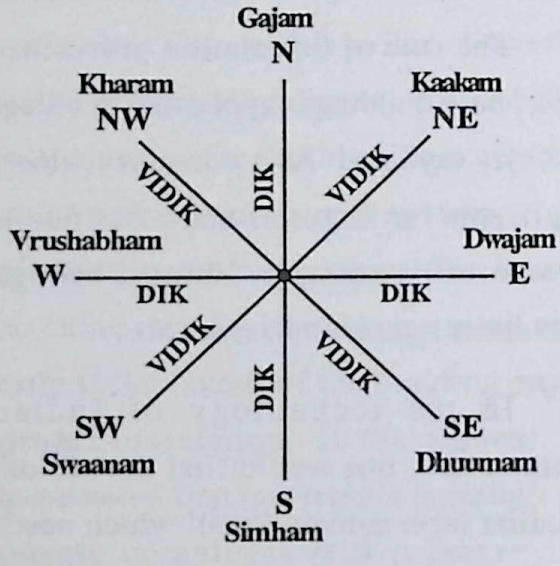
[1]Dwajam (flag staff), Dhuumam (smoke), Simham (lion), Swaanam (dog), Vrushabham (bull), Kharam (ass), Gajam (elephant), Kaakam (crow). They are called YONIS as also DISAA-YONIS. They are eight in number as stated above and signified by symbols.



Eight YONIS - Direction symbols

In this science of Vaastu it is held that from Microcosm to Macrocosm the qualities or properties inherent in them are one and the same, just as a particle of gold possessing the same properties as those of a big block of gold. In other words, the smallest particle of space-energy possesses the same quality as that of the biggest particle of space-energy called universe or universal space. These qualities are found to reflect in the house-buildings, whether traditional or modern and if built according to Vaastu principles, they become microcosms with positive qualities of subtle energies.

We have further discussed earlier that these directional lines are linear passages or conduits for the energy to flow from the energy-centre. In other words, the energy lines radiate from the centre of the Vastu as well as Vaastu in straight lines. Looked at from this angle, it will be evident that these directions determined with respect to the Sun, which is a fixed point of energy in the vast space, are present everywhere in the universe. **In the true sense, there is no direction at all. The directions come into existence, the minute the space becomes embodied and faces the Sun.**

If the directional lines are marked on the layout of the buildings, you will have the same energy lines starting from the centre of the layout (Brahma bindu Brahmasthan) and sprouting into eight directions. These energies that flow inside

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1 Also means Dwaja linga or Kaala thoon (Kaala Sthambha). Sthoona and thoon mean column. The Sivalinga inside the sanctum is Moola thoon or Moola Sthambha. Kaala sthambha means pillar of Time; Moola sthambha means - primal pillar of energy.

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and also come from outside sustain material forms after they come and establish themselves over the surface of the Earth. So these directional lines are indeed life-lines and technically called YONIS. One Vaastu shastra makes a reference to the YONIS which goes to mean that the yonis are the life-lines of a built space. योनिः धाम्नां प्राणः yoni hi dhaamnaam praanah.

In the technological field, the Vaastu Vedins calculate the dimensions, particularly the peripheral measure of the building, not arbitrarily, but with respect to the wave length of the individual or individuals occupying the space. They have a mathematical formula to calculate the wave length which is made up of points/particles/anu/புள்ளி/pulli. Added to that they also calculate various other qualities of the built space and the architect has to make a choice of a measure suited to the individual or family who occupies the space. Further the same formula is used for calculating the age of the building.

Elsewhere, it was observed that the house building is a living organism and it vibrates and behaves like a human being. That is to say, the house is not merely designed to look like a human form with feet, legs, thighs, torso and head, but is designed to possess the qualities inherent in the human organism. In fact, it is the structure of the 'karu' (say egg or seed) that is magnified into a building with all the qualities of Karu put into it, as identified to exist in the subtle karu-structure[1]. Hence in the tradition, the building has to be structurally either cubical or cuboidal. The forces of energies encapsulated in the karu are arranged into orderly spaces in cubical form tridimensionally. This is the subtlest concept of Vaastu science and technology, which would be elaborated at appropriate context.

The word 'yoni', which is referred to above, literally means the genital organ of a female being, through which descends a material form called 'sisu' the infant. This is the energy or subtle

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1 This aspect of Vaastu science is indeed the most subtle and fundamental. Hence it is held in the tradition that all built forms are mini universes. Vaastu Vidya, in deeper sense, is Brahma vidya. Philosophers and Yogis, it is believed, would appreciate this.

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space - a particle of akasa, that undergoes metamorphosis into an embodied form by virtue of the 'pleasant heat' or constructive energy emanating from the soil of the mother. This is just like mother-hen sitting on the egg and converting the essence into a chick.

So there are two ways for energy to flow in and flow out, one of entry and the other of exit in a straight line and in between, there is a process of form-generation and form-development as we have seen in the aforesaid analogy. This concept is incorporated in the design of a house, signified by the entrance door opening and the opening of the back door being arranged in a straight line. This concept of straight line connecting the entry and exit of a house is very meaningful in that, it allows the energies lying inside and outside to move in and move out without obstructions. This line or passage is likened to the backbone of the human body. So it is denoted by a significant term 'vamsa dandam' literally meaning 'bamboo pole' as also 'back bone'. This is also denoted by another term 'Brahma dandam' meaning 'thread of Spirit'. That it is channel-like is signified in the use of another word गुल्याभं 'gulyaabham' meaning 'channel-like'. This aspect is discernible in all the traditional pattern of residential buildings throughout the Indian sub-continent. This concept is stressed and made effective by the location of pials (தின்ணை / Thinnai) on either side of the main entrance. The Vamsa dandam or Brahma dandam is the central line of the house parallel to which runs the passage connecting the entry and exit points. This passage runs immediately left of the central line मध्य सूत्रस्य वामे .... प्रकल्पयेत् - 'madhya sutrasya vaame ... prakalpayet' - so far as residential buildings are concerned. For temples and public buildings, central opening is adopted in the tradition. देवानां मध्ये द्वारं प्रकल्पयेत्।- ' devanam madhye dwaram prakalpayet'.

We will discuss about the various other yonis and their effects on human life at another context. The main object of bringing under discussion this aspect of yoni is to emphasise the importance of proper orientation of buildings or village or town-spaces. If not, the adequacy of energy required for peaceful, blissful and healthy life in a built environment, will be either partial or lost, leading to physical or mental problems. What would happen

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to the human life if the passage of the flow of air into the body is obstructed either in the middle or at the end? The result is suffocation leading to collapse of physical and mental health. What is in a Karu (microcosm) can be found in macrocosm. Hence the Vedic saying अणोरणीयान् महतो महीयान् 'anooraniiyaan mahato mahiiyaan'. Please note the scientific significance of Vedic statement. Ordinary literal translation is not true to the implication. This is pin pointed in an upanishad called **'Silpa Vidya Rahasyopanishad'**.

Hence the directional lines are not imaginary lines marked on paper or on the ground but they are the lines of life-energy (Prana) to have free movement from within and without - Let me repeat that योनिः धाम्नां प्राणः 'Yoni hi dhaamnaam praanah'. There are other terms like **Brahma yoni** - womb of the Brahman, the supreme being; **Vyoma yoni** - womb of the cosmos, wherefrom all live objects of the universe are said to gush forth and sprout out into existence.

There is a significant word in Tamil 'இழிதல்' 'Ilithal' which is related to the posture of a lady giving birth to a 'sisu' via yoni. This is applied to the genesis of all objects of nature which plays the role of a mother delivering a sisu. It is the space-karu (விண்கரு Vinkaru) that delivers the material karu, the visual material objects of the universe. Mayan makes use of the epithet 'விண்ணின்று இழிந்த பொருள்' meaning the objects that got delivered from the womb of space.

The following is the procedure for determining the East-West and North-South directions with respect to the land chosen for a building, either for residential or for commercial purposes.

Let us now discuss how the cardinal directions are determined by Sun's shadow. The site chosen for the building is levelled up, perfect to the spirit. At the centre of the plot, a gnomon made of wood, and of 24 manangulas long (33") is erected. The gnomon should be circular with 5 angula diameter and also flat at the bottom, with its body tapering from bottom to top like a cone, on the crest of which it would be one angula wide and the tip rounded. A pin or needle is also mounted on this apex. This conical gnomon is called Shanku in the tradition. This is not a conch, as mistaken by a section of the new entrants to Vaastu. A circle with the radius equal to the height of gnomon is drawn on the ground and the shanku erected at the centre of the circle.

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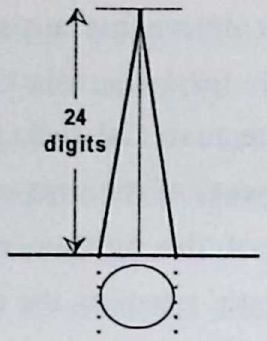

GNOMON

Usually this experiment is conducted on a day when the sky is clear. The sky will be clear during the months of uttarayana (December 22 to June 21) and on an auspicious day, the gnomon should be installed before sun-rise. The shadow cast on the ground by the gnomon early in the morning will be very long and gets diminished as the Sun moves from the east to the zenith of the sky. When the tip of the shadow of the gnomon touches the circle on the western side, a mark is made on the circumference. This mark is called 'bindu' (புள்ளி). The shadow further moves from west to east in the afternoon as the Sun moves towards the west. When the evening shadow touches the circle, another marking is made on the perimeter. Now two points, marked on the perimeter of the circle, are available and they are connected by a straight line. This is the East-West line so far as the particular day of the month is concerned. Logically this is not the true East-West line that we are interested in. The true East-West line are available only when the shadows are watched and the points (bindus) marked on 21st March or 21st September of a year, in view of the fact that the Sun appears directly, in line with the equator, on those two days.

[1]कन्या वृषभ मासौ च अपच्छ ाया नवियते

'Kanyaa Vrishabha maasou cha apachaayaa na vidyate'.

('Apachaya' is the deflected shadow which has to be corrected to get the real chaayaa or shadow').

The Sun during a year, as we have already seen, travels in the northern hemisphere for a period of six months called Uttarayana and in the southern hemisphere for another six months called Dakshinayana. Naturally the shadows cast during these months will be away from the true East-West line, either falling on the northern side or on the southern side as the case may be. So to arrive at the true East-West line, a correction needs to be made.

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1 Kanyamasa is Purattasi (புரட்டாசி) the sixth month from Chittirai Rishabha is Vaikhasi, the second month.

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The unit of measure by which this correction is carried out has got a relationship between the height of the gnomon and the diameter of the circle drawn on the ground. Normally the height of the gnomon will be of 24 mana angula (33 English inch) or 18 or 12 or 9 manangula where one mana angula measures $1^3/_8$". The corrections have to be carried out only in terms of these digital measures irrespective of the heights of gnomon indicated above.

The following are the measures by which the correction has to be made. These measures are taken from "Maya's Vastu Shastra".

There will be no correction during the months of Kanya (Purattasi) and Rishaba (Vaikasai) as there is no apachaya, meaning 'deflected shadow' during those two months. In other words, the correction for true East-West is nil for these two months.

The duration of the months is divided into three equal periods, each of 10 days. The scale changes during these periods, according to a rhythm in the movement of the Sun.

The corrections for apachaya for the first 10 days, the middle 10 days and the last 10 days are tabulated for readers' convenience. By applying the angula measure from the south to north or from north to south, the true east west line can be identified.

Now that the East-West line has been determined with all corrections carried out, the North-South line which is actually the perpendicular to the true East-West line can be easily ascertained. This is determined by drawing two arcs, one larger than the radius or lesser than the diameter, the ends (bindu points) of the East-West line being their centres. These two arcs drawn above the East-West line and below the East-West line will cut each other giving two more points. When these two points are joined, it would be found to create a line perpendicular to the East-West direction. This is North-South line. The East-West line is called Praachee sutra (கிழமேல் நூல்) or Soura sutra or Brahma sutra and the North-South line, (தென்வடல் நூல்)

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1 The manangula referred to here may also be taken as a digital measure. In that case the chosen height of the gnomon has to be divided into 24 equal parts.

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Sl.No.	Months	First 10 days	Middle 10 days	Last 10 days
1.	Mesha (Chithirai)	2 Angula	1 Angula	0 Angula
2.	Vrishaba (Vaikhasi)	0 Angula	1 Angula	2 Angula
3.	Mithuna (Aani)	2 Angula	3 Angula	4 Angula
4.	Kataka (Aadi)	4 Angula	3 Angula	2 Angula
5.	Simha (Aavani)	2 Angula	1 Angula	0 Angula
6.	Kanni (Purataasi)	0 Angula	1 Angula	2 Angula
7.	Tulam (Iyppasi)	2 Angula	3 Angula	4 Angula
8.	Viruchika (Kaarthigai)	4 Angula	5 Angula	6 Angula
9.	Dhanush (Maargazhi)	6 Angula	7 Angula	8 Angula
10.	Makara (Thai)	8 Angula	7 Angula	6 Angula
11.	Kumbha (Maasi)	6 Angula	5 Angula	4 Angula
12.	Meena (Panguni)	4 Angula	3 Angula	2 Angula

Soma sutra. They are the cardinal directions, required for purposes of orientation.

What we have now reached applying corrections, is also called by the term Suddha - Praachee from which another praachee called Esa Praachee is desired. For this, the deflection from the true East-West line towards North-East in terms of angula measure is one. This deflected line of Esa Praachee is extended forward and backward so as to align the building layout exactly on it or parallel to it.

The building to face the true East-West should be parallel to the East-West line, in as much as the building to be in line with Esa Praachee is drawn parallel to the Esa Praachee line (Vide drawings on page 19).

There is also a subtle point with respect to the Suddha Praachee (true east) and the Esa Praachee according to Manasara. **A building oriented parallel to Suddha Praachee will be ideal for people who aspire for liberation or Moksha**

मुक्ति कामस्य करणे शुद्धप्राचीं प्रयोजयेत् ।
'mukti kamasya karne suddha pracheem prayojayet'

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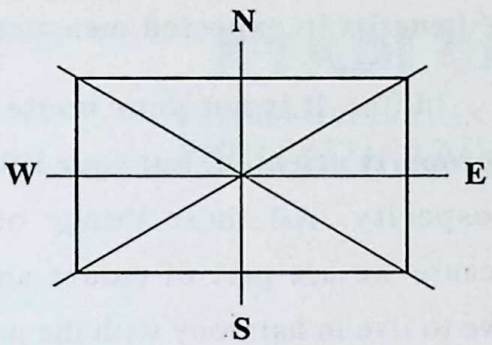
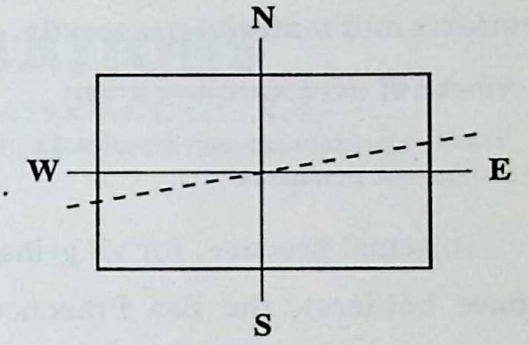
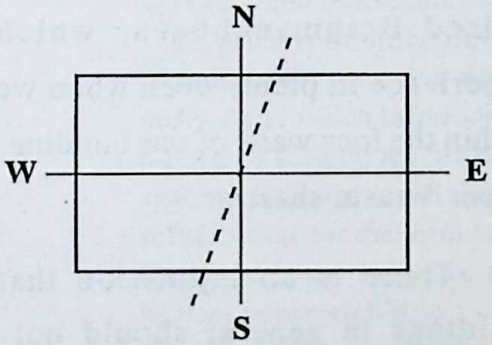
ORIENTATION OF PLOTS



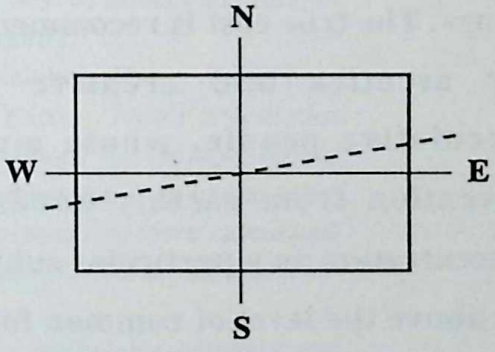
TRUE EAST
(SUDDHA PRACHEE)



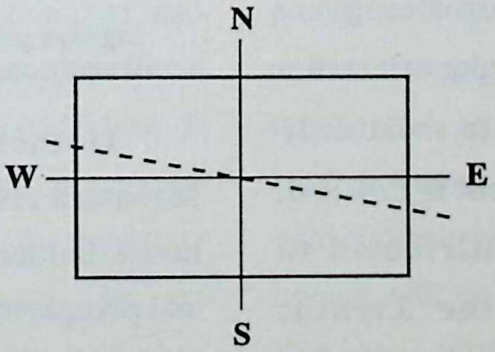
DEFLECTED EAST
(ESA PRACHEE)



Orientation with respect to
NORTH or SOUTH
Facing House or Plot



Orientation with respect to
EAST or WEST
Facing House or Plot



AGNEYA PRACHEE
(Not Applicable)

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and Esa Praachee is applied in the case of those who desire for earthly comforts and material prosperity.

ऐशान्य प्रचीं सर्वस्य भोगकामस्य सम्मता।

'Isaanya praacheem sarvasya bhoga kaamaasya sammataa'.

In actual practice, for all grihastas (house holders), the Esa Praachee is widely adopted. Even temples are aligned with the Esa Praachee so that the deity enshrined may have the tendency to confer earthly comforts and pleasure on human beings. **The true east is recommended for ascetics and creative and speculative people, whose aim is liberation from earthly bonds or concentration on a particular subject, far above the level of common folk.**

From the foregoing discussions on the importance and significance of orientation, it must be clear now that the human welfare and well-being are depended primarily on proper orientation as enshrined in the Vaastu shastras.**If only this basic requirement is fulfilled, the benefits that are attributed to proper spacing of the layout, positioning of door opening, placement of kitchen, bed room, etc. would yield the benefits in expected measure.**

In fine, **it is not your house that is properly oriented, but your life and prosperity**. All these things occur, because we are part of nature and we have to live in harmony with the nature, not merely with the gross, but more with the subtle. **In as much as the subtle is Brahman, logically, we live in communion with the Brahman.** This is indeed Brahmanubhava, which we experience in plenty even when we live within the four walls of our building, built as per Vaastu shastras.

There is an injunction that the buildings in general should not face Agneya Praachee (East-West line turned towards South-East line), as it will cause all kinds of negative effects on human life.

आग्नेय प्राचिकं वास्तु तस्मात् सर्वं विवर्जयेत्।

'aagneya praachikam Vaastu tasmaat sarvam vivarjayet' (Manasara)

If these rules are followed, Manasara asserts, that the house and the house-holder would enjoy all comforts and prosperity.

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21

AYADI CALCULATIONS

TRANSFORMATION OF THE MATERIAL UNIVERSE INTO SUBTLE UNIVERSE OF PEACE AND BLISS.

For each and every visible phenomenon there is corresponding invisible one - examination of Vastu and Vaastu - conversion of Vastu into Vaastu and Vaastu into Vastu - subtle into gross and gross into subtle - analysis of cause and effect - going back into the cause and rearranging the effect to the best of human advantage - this process of mitigating the fate is 'ayadi'.

'Ayadi' as the secretive aspect of Vaastu science. Every one is born under a star which influences one's life on Earth - 'Ayadi' calculation takes into account the birth star of an individual, for creating living spaces - Building is a living organism in whose lap man has to take refuge - Star for the birth of this organic form is therefore calculated by the designer - while co-existing with the built-form, man enjoys perfect peace and bliss.

'Ayadi suddhi' (purified measure) affords material prosperity and spiritual wellbeing on the occupants - Various other material benefits are also derived from such Vaastu based structures - The end result of all that is Vaastu is spiritual peace and bliss.

We have already discussed at many a context that man, though a part and parcel of Nature, is subject to the effects of subtle and gross qualities of Nature. It is common experience that none can escape from the positive or negative impacts of the forces of Nature. They are bound to happen in spite of one believing or not believing it. However, man has averted the negative influences and certain other life-problems to the maximum extent possible. For instance, the 'time and space' (in physical sense) have been conquered by contemporary science. Inter communication between man and man and between country and country has been made quicker and instantaneous. Business contacts have increased manifold. The advanced science and technology have helped him to tide over

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many a problem posed by Nature. Yet, he finds himself restless and unhappy. He is subjected to various tensions, conflicts, quarrels, wars, diseases, fears, failures, accidents, premature demises etc and they are on the increase. In spite of incredible advancement in medicine and medicare and increasing, clinics and hospitals, new diseases are cropping up and multiplying day by day. The solution for all these ills is still far to seek. What would surprise you at this context is that the solution to this or redemption from such a state of misery is available with the science of Vaastu. If you could set right your habitat you would be far away from all ills that you face today. As earlier pointed out your house is not an inert structure. It is an ecological friend of yours who would shape your character and behaviour and make you a superior human being. What is the secret? What is the corrective or preventive force? It is the concept of space and the realization of the effects of space on man and his habitat as conceived by the Vaastu, that has come to him as a boon from the blue. In other words, the house built by man, by virtue of the very same space being enclosed, is identified to be another universe with all the forces that one finds in the outer universe. Realizing the constitution of the cosmos at subtle level as an orderly or systematic whole and realizing that it is subject to a mathematical formula, man was able to apply it, in the creation of living spaces and make his little universe, a place of peace and pleasure. Added to that, well defined spaces, if experienced in a built-form, would mould his character, sharpen his intellect and confer material welfare and spiritual wellbeing. Discovery of a mathematical formula that controls the universe and implication of the same in the creation of little universes (houses) is the greatest achievement of Indian science. Mayan, the greatest of scientists and the discoverer of this mathematical order in the universe, has made use of it to carve and recreate little universes on the Earth, for the peaceful life of the entire human race. Hence he has observed that **"architecture is the zenithal achievement of mathematics"**- "கட்டிடக் கலையே கணக்கியல் உச்சி" "Kattidak kalaiye kannakkiyal uchi". Mayan's equation of Time and Space has added another dimension of creating musical ambience in the very space enclosed by the built form. Understanding this highest truth and with abundant compassion and love for humanity, Mayan has evolved a unique system of architecture, and called it "the

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[1]architecture of the Vastu and Vaastu". This part of the Vaastu science is called therefore 'Vaastu Rahasya', 'rahasya' here meaning only the subtlest part of the science which would be very difficult for the uninitiated to appreciate and follow. There is no other secret about the role of Indian Vaastu excepting that it looks upon the outer space as the manifest form of the unmanifest with an internal order and it (the Indian Vaastu) encloses that order in the built form for the human race to live in perfect union with the universal being. This is the state of existence of individual beings losing their identity and merging with the universal being in spiritual ecstasy. This is 'mukti' or 'moksha'made possible to be enjoyed even during life on the Earth. Hence, in the Tamil tradition the word வீடு 'Veedu' 'house' denotes both material house built by man as well as the subtle house of the spirit, the universe. The gross is turned into subtle with all the qualities of the subtle put into the gross in a mathematical order.

Hence, the Vaastu shastras emphasize that the house designed and built by the shilpis according to Vaastu principles, alone confersभुग्ति (material gains) and मुक्ति (spiritual peace) during life on the Earth[2]. एभिर्विनाकृते तु सफलं भुग्तिं मुक्तिं च न विन्दति (Manasara Chap.2 sloka19.) meaning "without these people (shilpis), man enjoys no material welfare or spiritual wellbeing, during his life on the Earth". The unification of the drifting and sweating societies under one spiritual culture was also Mayan's endeavour, even during his life time. On this account he is said to have travelled all over the globe and directed his own disciples to go out as emissaries in different directions. It is believed that, by now, the researchers would have realized this, through the effects of the application of Vaastu

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1 प्रासादादीनि वास्तूनि वस्तुत्वात् वस्तु संश्रयात्।
तान्येव वस्तुरेवेति कथितं वै वस्तुविद्बुधैः॥ - Brahmarishi Maya's 'Mayamatam'.

2 तेषामेव स्यपत्याख्यः विश्वकर्मेति सम्स्मृतः
एभिविनाहि सर्वेषां कर्म कर्तु नशक्यते
तस्मादेतत् सदापूज्यं स्यपत्यादि चतुष्ट यम्- Mayamata, 5th chapter, verses 23-24.
It is actually not the individuals that are concerned here, but the application of the principles of Vaastu is implied.
एभिस्स्यपत्यादिभिरत्र लोके
विनाग्रहीतुं सुकृतं न शक्यम्।
तैरेवसार्धं गुरुणाथ तस्मात्
भजन्ति मोक्षं भवतस्तुमर्त्याः॥
Maya in Mayamata Vastu Shastra, chapter 5. sloka 25.

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science and technology that are spreading fast today, throughout the globe. This 'order', Mayan was able to extend to poetry, music and dance, focussing all, towards the achievement of peace and bliss during life on Earth.

I take inestimable joy to repeat here that the architecture of the Vaastu is indeed the architecture of the OM sound' and 'OM light' which reflects on the architecture of the visual and aural forms that men of the Vaastu tradition create. This is the reason why the kings and monarchs flooded the country with innumerable edifices based on Vaastu. This is therefore 'sacred architecture' as designated by the western scholars.

In the Indian cultural scene, one could find two basic and primary sciences standing aloft, as the causal factors of Indian civilization and culture, out of which evolved the great science of Vastu and Vaastu - the architecture of visual as well as aural forms. For these two basics, Mayan is identified to be the author. The first one is the science of speech or orderly articulation of inner feelings and the other one, the science of the influence of celestial bodies (particularly of stars) on human and terrestrial affairs. The resultant sciences or applied sciences, as they exist today, have come to be called, 'grammar of language' and 'grammar of the movement of heavenly bodies'. In Sanskrit they are व्याकरण (Vyakarana) and ज्योतिष (Jyotisha) respectively and in Tamil, they are [1]தமிழியல் (Tamilial) and [1]வானியல் (Vanial) with their origin, as we have seen already, in OM sound and OM light. The OM being Brahman, (ओमिदं ब्रह्म) they are individually designated as Sabda Brahman and Artha Brahman (Para Brahman). Today, it is very widely known that 'Surya Siddhanta' is the most ancient treatise on Astronomy, authored by Mayasura, who is none other than the author of Mayamata Vastu Shastra. It must be clear now that Vastu shastra is 'Artha shastra', having had ascendancy through the ladder of 'Sabda shastra'-from Sabda Brahman to Para Brahman which is recorded in the upanishadic verse[2].

As regards 'Vyakarana' the grammar of language, one thing is

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1 Tamilial - the science of sound of the Tamil language; Vanial - the science of Astronomy.

2 द्वेब्रह्मणी वेदितव्ये शब्दब्रह्म परंचयत्।
शब्दब्रह्मणि निष्णातः परं ब्रह्माधिगच्छ ति ॥- **Brahma Bindopanishad.**

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frequently and basically referred to by critics of grammatical works, which have not been seriously taken note of by the present day scholars. It is said, that there was one grammatical work called 'AINTIRA Vyakarana' and it is that which has provided the basics for evolving Tolkappiam[1], the Tamil grammar and also for Ashtadhyayee of Panini, the Sanskrit grammar. This AINTIRA Vyakarana, again authored by Mayasura, is not a Vyakarana, according to contemporary sense, but it is a science concerned with the construction of syllabic sound, word and sentences-that is, from Vaak to Vaakya also from 'vaak' to 'artha'. It ranges in the subtle realm of 'sound' and 'light' as the sources of all aural and visual forms. It deals with how they (sound and light) turn into word-form and visual material form, out of consciousness or feeling. It is therefore, a science of 'Vaak' and 'Artha' also known as 'Pada' and 'Artha'. It is not another treatise on grammar of one particular language, though Tamil being his mother tongue, lies at the root of his discussions. There is an interesting piece of information from a research journal which gives the existence and prevalence of AINTIRAM even during the days of Ramayana. It must have been held so important as to go into the great epic. In the 'News letter' of the International School of Dravidian Linguistics, Thiruvananthapuram, it is found that Hanuman was an expert in AINTIRA Vyakarana. How and why, [2]Hanuman should be dragged into this

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1 ஐந்திறம் நிறைந்த தொல்காப்பியம், Tolkappiam, replete withAINTIRAM (scientific basis provided by AINTIRAM). The Ashtaadyaayee of Panini is also indebted to Aintiram as inferred from an article by Dr.Navjyot Singh of the National Institute of Science and Technology and Developmental studies, New Delhi. Hanuman is said to be one, well versed in Aintira Vyakarana. Now, the Agama of the south is bound to replete with aid influenced by Aintira Sutras of Mayan. There is an Agama called Maya Agama to be published by Vaastu Vedic Research Foundation. The commentary under Mrigendra Agama quotes one Mayagama. Maya's Sanskrit verses are quoted by the commentator. What do you feel about the antiquity of Maya's works?

2 News letter from International School of Dravidian Linguistics, September 1996 issue, page no.4. My own interpretation is that Hanuman represents the most ancient race that inhabited the southern part of India. Poet Valmiki should have given an artistic or poetic form to this concept by projecting Hanuman with monkey face, while 'Rama', his contemporary, is projected as a handsome youngman. How could such a vast difference occur while he is considered as a great scholar and highly skilled? He is painted as a great scholar of sciences ('Shad shastra pandita'). Now he is identified as a pandit in AINTIRA VYAKARANA. Further my own inference is that he must have belonged to Mayan race to come to adorn the flag of the shilpis of India. Shilpis even today have a flag of pancha varna with the figure of Hanuman superposed. Hence Vishwakarmas are called Hanumakkodiyore அனுமக்கொடியோர் while Ravana was called Veenaikkodiyon வீணைக்கொடியோன் - holder of a flag of Veena, the musical instrument. It may be added here for scholar's remarks that Maya was the father of Mandodari and father-in-law of Ravana, who is said to have recited Vedic hymns to get himself relieved of the weight of Mount Kailas, put on him by Shiva.

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picture? Does Hanuman respresent the aboriginal tribe of South India? May the scholars of language take up this research and solve the riddle![1] This will yield lot of dividends.

At this juncture, I am to bring to the notice of the international scholars that AINTIRAM, the 'Vyakarana' has already been printed by the Government of Tamilnadu, through the Directorate of Technical Education, Madras in 1986. This contains the basics of the grammar, rather I would say, the science of aural and visual forms from which, supported by the existing texts on Vastu and Vaastu, I have been discussing the science and technology of Vaastu Shastras, where I find them technologically interpreted. If Vaastu is technological, theAINTIRAM is scientific. In other words Aintiram is not

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[1] The shilpis of Bharat, from Kashmir to Kanyakumari and from Gujarat to Bengal form a separate Vedic class with indigenous origin. They have formed themselves into a pentadic group of people (guild) in the names of Manu, Maya, Twashta, Shilpi and Viswajna, about whom elaborate details are already furnished elsewhere. This grouping of shilpis into five is very significant, in that every object or form has a basic process of evolution passing through five stages and ultimately aggregating into one unitary whole. Their grouping falls in line with the fundamental law of Nature. This pentadic scheme of things in Nature is an element of Mayonic science and technology. It will be interesting to note the following pentadic schemes as we find ingrained in our tradition.

Pancha bhootas	-	Five elements.
Panchendriyas	-	Five senses.
Pancha varnas	-	Five colours (shades of thought)
Pancha grahas	-	Five planets.
Pancha swaras	-	Five syllabic sounds ச, ரி, க, ப,த.
Pancha aksharas	-	Five vowels அ, இ, உ, எ, ஒ. (This is moola panchakshara).
Pancha janas	-	Five races.
Pancha vaastus	-	Five types of land - kurinchi, mullai, marutham, neidal and palai.
Pancha lohas	-	Five metals - gold, silver, copper, tin and lead).
Pancha sabhas	-	Five halls (gold, silver, tamra, chitra and chitsabha).
Pancha ratna	-	gems. Blue, Diamond, Padmaraga, Pearl and Coral. नीलकं वज्रकं चेति पद्मरागंच मौक्तिकम्। प्रवालं चेति विज्ञेयं पंचरत्नं मनीषिभिः॥ Another group: सुवर्णं रजतं मुक्ता राजावर्तं प्रवालकम् रत्नपंचकमारव्यातम् Gold, Silver, Pearl, Rajavartam and Coral.
Pancha anana	-	The five faced Vishwakarma.
Pancha prana	-	prana, apana, samana, vyana and udana.
Pancha gandha	-	karpura, kallola, lavanga, pushpa, jatiphala.
Pancha tanmatra	-	(Pancha bhoota moolam (the arche types or subtle rudiments of elementary matter) sabda, sparsa, rupa, rasa and gandha).
Pancha khammar	-	black smith, carpenter, silver smith, builder, jeweller. (Manu, Maya, Twashta Shilpi and Vishwajna).
Pancha devata	-	आदित्यं गणनाथंच देवीं रुद्रं चकेशवम् சூரியன், கணபதி, தேவி, குத்ரன், விஷ்ணு पञ्चदैवमित्युक्तं सर्वकर्मसु पूजितम् Suryan, Ganapati, Devi, Rudran, Vishnu
Panchanga	-	Thiti, Vaara, Nakshatra, Yoga and Karana.
Pancha kosha	-	अन्नमय, प्राणमय, मनोमय, विज्ञानमय, आनन्दमय Annamaya, Praanamaya, Manomaya, Vijnanamaya, Aanandamaya

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only lying at the bottom of the grammar of languages - grammar of aural forms - But also at the bottom of the grammar of visual forms.

Just like 'Surya Siddhanta', 'AINTIRAM' is also authored by Mayan. This AINTIRAM looks at the universe not only as a living organism - composed of the basic five elements, but goes beyond them to recognise the existence of two more elements - the elements of 'sound' and 'light' [ஒலி (Oli) and ஒளி (Olli)]. Going further beyond 'sound and light', it identifies the existence of the quality of 'movement' or 'vibration' in them, acting as the causal element for the universe and universal objects to flower into existence, like the chick from the egg, like a plant from the seed. This causal element is 'Time' as discussed at a number of contexts. Further beyond, the AINTIRAM penetrates and locates the luminous space ஒளிவெளி Olli Veli as the primordial source of energy. In other words, it is 'light' that is the root of the universe - This is ஒளிமூலம் 'Olli moolam' 'light as source'. This is energy. This is indeed consciousness / awareness. In Tamil it is உணர்ச்சி unarchi, which is the literal meaning of ஒளி Olli. Are 'energy' and 'unarchi' synonyms? Yes, experientially it looks like that. Does not Veda also say प्रज्ञानं ब्रह्म? Awareness is Brahman! This unarchi is a substance, a live substance which is VASTU. (वस्तुत्वात् वस्तु संश्रयात्).

In physical sense, in the place of 'sound' and 'light' we have 'Vak' and 'Artha' वागर्थ 'Vagartha' also called 'Pada' and 'Artha' पदार्थ 'Padartha'. They are inseparably blended संपृक्तौ in the sense, Vak, the articulated word reflects only the 'form' - the luminous form, a form sensitive to our inner being. To be precise and pointed, it is the **inner being** itself. So AINTIRAM is an anthology of 'Vaijnanic sutras' or 'Brahma sutras'[1], to be more appropriate. The sutras are related to Sabda Brahman and Artha Brahman.

Why I have been repeating most of the things already discussed in the pages of this book is this. Beyond this, there is one thing, which is the underlying element of 'benefit', to human kind. What is that ultimate benefit? The answer is the question. Can you point out the benefit of a piece of music? It evokes ineffable

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1 Technical meaning is 'thread of light or shaft of consciousness'.

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sense of beauty and joy-bliss and peace. It is 'Parasukham' in the words of Vaastu Vedins. Addressing God as music (இசை) or essence of music, a Tamil poet goes further to say that God is also the effect (இசைப்பயன்) of music on human mind. Yes, this is the effect or benefit that is ultimately realized by the 'Atmans' occupying Vaastu spaces. This is the space where an individual lives in permanent communion with the 'Divine'. This is the state, where the duality of Rasika and Rasa cracks down and dissolves in the ocean of bliss-ananda/ களிப்பு (Kalippu) or களியுணர்வு (Kaliyunarvu) to use Mayonic Tamil. This is the scientific interpretation of the advaitic experience that one is blessed with, when one resides in a house or worships in a temple built according to Vaastu formulae.

To achieve this state of perennial bliss in a built space which came to be designated as Garbhagriha later, during the evolution of the primary concept of square into different patterns of visual and aural forms, the Vaastu shastras have evolved certain mathematical sutras, that fall under the head of 'Ayadi Lakshana' or 'Ayadi Ganitha'. These epithets have very deep significance. Ofcourse, as you would see while calculating mathematically certain results, they (the formulae) would look to be as simple as $E = mc^2$, but to understand and assess the amount of deep thinking and search that could have gone into the making of the formulae, is really beyond the level of any human mind. These formulae are made use of very regularly by all traditional practitioners in the Vaastu field.

Such a long and protracted discussion on 'Ayadi ganitha' is not without purpose. Certain scholars of Indian origin have held and propagated Vaastu as a limb of astrology. It is painful to see and hear, that such an exalted science of space and time is subordinated to Jyotisha. You would presently see, how it is different from astrology. Astrology is a limb of Veda, hence Vedanga. It has got its own unique place in the life of human race. But Vaastu is an independent science with a rare technology of its own, that are even today inimitable by one not initiated into this domain. It is engineering, to use modern word. It is of deeper significance of forces of subtle nature-the dynamics of the Absolute and the Ultimate, the creative

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energy. Vaastu is not even treated traditionally as Vedanga, but it is treated on par with other Vedas. It is a Veda of a unique kind. It is Sthapatya Veda. It is a Veda concerned with the structure of the macro and micro universes and rebuilding the same on the Earth. It is the architecture of, as earlier observed, aural and visual forms of Nature. It is a science concerned with the measure and construct of the universe and applied them in the design and construction of buildings of gods and men. They are spaces and spatial forms. They have their origin in the very structure of 'OM'. It is creation, not speculation. It is not inferential but experiential. All that are created are visuals and tangibles. The aim of the Vaastu is to provide 'space' for human beings to live in harmony, not only with gross nature but also with subtle nature, which would lead to physical welfare and spiritual wellbeing. While doing so, it provides for individual space or collective space suited to the wave lengths of all concerned or involved. We speak of wavelengths of individuals but no science tells us as to how it is calculated. Only at this point, the birth star is referred to and certain rare calculations are done by the designer. Here we digress from the astrological concerns. This is more on the side of astronomy and beyond, rather than on the side of astrology.

Astrology, the applied astronomy, takes into account, primarily and basically the 'time' of birth and predicts the present and future. It cannot change the course of events in a man's life, as he has to live in the atmosphere of gross world. On the contrary, in the case of Vaastu, man is put up in a different ambience where he is freed from, worldly tensions and miseries. To a large account, it changes the fate of man, relieves him from earthly tensions and gives him longer life added to other benefits already stated in the previous discussions. It moulds his character, behaviour and the very way of life on Earth. This 'time' of birth is 'absolute time' according to Vaastu ganitha. Hence, we say that 'absolute time creates life'. The calculation of age starts from 'o' time which grows into days, months and years. This is the work of the speed or force of inherent energy on human form and psyche, in the making. Therefore this 'time' is very important in the Vaastu technology. But there is one important factor of difference between the processes of astrology and that of

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technology. The astrologer cannot anticipate or fix the time of the birth of a baby at his discretion. He cannot prepone or postpone - the time of birth in order to enable the child to have its birth under a favourable star. We escape saying it is fate. An astrologer's role rather amounts to what may be called 'post birth predictions'. But as far as the calculations that the designer does in the birth of a 'living organism' called "building" are concerned, the process is the reverse. The 'birth' of a 'building' is pre-determined with respect to the wave length of the individual or individuals who would be occupying the built space, the association, or the co-existence with which, the fate of the individual is mitigated or reversed in certain cases, ofcourse remaining within the bounds of the broad law of Nature. Such a benefit to man is made possible by the 'ayadi ganana'. So, I do not like to name this part of the Vaastu technology as astrology. I would call it cosmology as it is concerned with the structure and its effects.

Coming to the topic of the chapter, a few words are found indispensable for better understanding of the subject matter, under 'ayadi ganitam'. There are two important and significant terminologies, integrated in the word 'ayadi'. Normally, the word 'ayadi' is split into 'aya' and 'adi' to mean 'income' and 'etcetera'.

'Aya' also means 'length' and 'adi' is, as said earlier, means etcetera. Aya is also denoted by the word 'aayaamam', a terminology for 'length' or 'strech'. But the word 'adi' has another meaning namely, 'source' or 'moolam' as in the name of 'Adi shakti' meaning 'moola shakti' - source of power or power-source. Then the word 'ay' (ஆய்) means 'to search for' or 'to probe'. So 'Ayadi' means not only 'income etc'. but also 'to search for the source' (ஆதியை - மூலத்தை ஆய்தல்). Actually both these 'investigative aspects' are implied in the terminology and also considered or respected while doing calculations.

Now let us go into details of "ayadi gananam". There are six aspects to be examined under the 'ayadi'. They are, 'aya', 'vyaya', 'yoni', 'vaara', 'nakshatra', and 'amsa' each aspect being called 'varga', meaning group and so it is "Ayadi Shad Varga".

1. Aya — income / benefits / linear measure (aayaama).
2. Vyaya — expenditure.
3. Yoni — direction indicating

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the flow of Energy / Prana. योनिः प्राणां धाम्नः

4. Vaara — week.
5. Nakshatra — star.
6. Amsa — quality / feature.

All these aspects of a building, to be established, have to be identified weighed and beneficial points incorporated in the design, to the best advantage of the intended dweller of the space.

AYADI CALCULATIONS FOR PERSONAL ARCHITECTURE

BUILDING SITE AND ORIENTATION:

Let the Area of the building site be = 60'.0" × 40'.0" (One ground). Let us assume that the orientation of the building is East.

APPROXIMATE MEASURE:

Let the approximate dimension of the building to be decided be 30' x 45' (in 1:1½ proportion). This depends on the need of the family as also the availability of funds.

PERIPHERAL MEASURE:

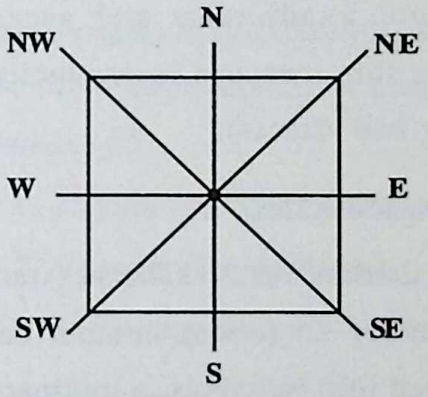
Peripheral measure of the building as approximately decided is (30 + 45)2 = 150'.0".

Area of the building = 1350 sft. We have to carry out certain tests and choose a purified, auspicious and suitable measure for the family members in general and the mistress in particular.

AYADI NUMBER:

To convert the British unit to

Orientation is a vital aspect of Indian architecture.

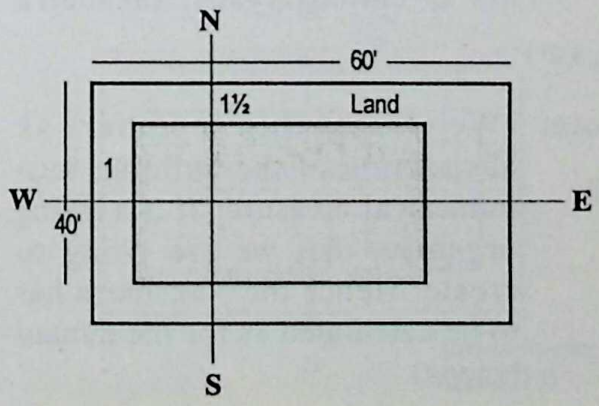


Orient your house in the cardinal directions (NE, SW).
Avoid diagonals. (NE, SE, SW, NW)

Table of Vaastu units

1	Angula	=	1 3/8"
24	Angula	=	33" = 2'.9"
1	Angula	=	Viral (விரல்)
1	Hasta (cubit)	=	2'.9" .

Land and Building



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shastric measure, divide the perimeter i.e. 150' by 2'.9" (cubit) so as to arrive at a measure in terms of Muzham (முழம்).

$\frac{150'.0"}{2'.9"} = \frac{150}{11} \times 4 = \frac{600}{11} = 54^{6}/_{11}$ Cubits (Hasta).

Make this measure rounded say 55 cubits or 151'.3" (55 × 2'.9" = 151'.3").

(You may also keep it as 54 and carry out ayadi tests and ascertain whether this measure is productive of good or bad effects).

AYADI NAKSHATRA:

Calculate the Nakshatra (star) for this number 55 (every number can be converted into Nakshtra, a luminary) by multiplying this 55 by 8/27 the reminder is $440/27 = 16^{8}/_{27} = 8$.

This means the 8th star from Aswini (vide star table).

The Nakshatra for this number is Pushya or Poosam (பூசம்).

This is called Ayadi Nakshatra (பூசம்).

Note: (We treat this number as abstraction of the building into numerical measure. It is a living organism that we are going to create. Hence the Nakshatra has to be calculated as for the human beings).

Nakshatra Table
Classified under 3 paryaaya's (groups)

	1	2	3
1.	Aswini	Magham	Moolam
2.	Bharani	Pooram	Pooradam
3.	Karthiga	Uttiram	Uttiradam
4.	Rohani	Astham	Thiruvonam
5.	Mrugasirsha	Chittirai	Avittam
6.	Tiruvadirai	Swati	Sadayam
7.	Punaravasu	Visakam	Poorattadi
8.	Poosam	Anusham	Uttirattadi
9.	Ayilyam	Kettai	Revati.

SUITABILITY OF THE AYADI NUMBER:

Now, with reference to birth star (Janma Nakshatra) of the mistress of the house (மனையாள்), the ayadi Nakshatra should be verified and the measure confirmed. Similarly the nakshatra of the husband and son may also be considered, though not as important as for the mistress of the house.

Mistress : Poorvabhaadra/Poorattadi (பூரட்டாதி)

Husband : Visaka (விசாகம்)

Son : Uttarashaada (உத்ராடம்)

From these Nakshatras count the position of the Ayadi Nakshatra, and find out the phala or benefit. (Vide Paryaaya table).

Mistress : From Poorvabhadra to Pushya 9 + 2 = Sampath (9 denotes 1st Paryaya and 2 denotes the 2nd in the 2nd Paryaaya).

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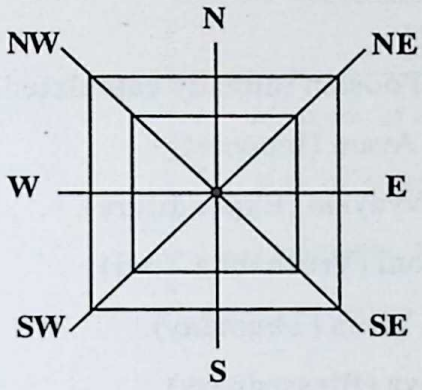


Eight Yonis and Eight Directions

PARYAAYA TABLE
Paryaaya Benefits - the benefits are the same for each group of Nakshatras.
1. Janmam
2. Sampath
3. Vipath
4. Kshemam
5. Pratyaram
6. Sadhakam
7. Vadham
8. Maitram
9. Parama maitram
Note : 2,4,6,8,9 are good.

Husband : From Visaka to Pushya 9 + 9 + 2 = Sampath (Similarly 2nd in the 3rd Paryaaya).

Son : From Uttradam to Pushya 9 + 6 = Sadhakam (6th in the 2nd Paryaaya).

From this it is evident that 55 cubit measure suits the family members very well. Further this measure is close to their affordability. Or otherwise, you will have to choose another measure which may be either larger or smaller.

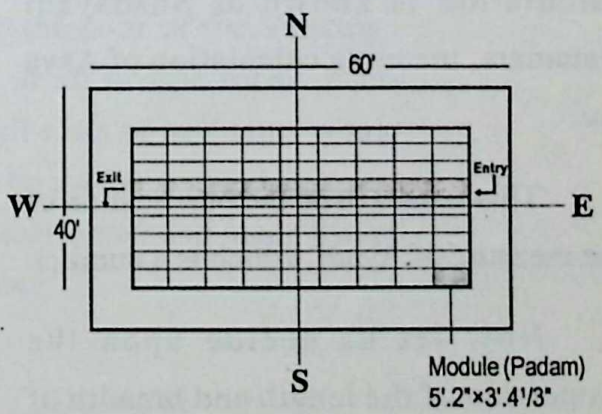
OTHER ASPECTS:

Now that the Nakshatra test (test of wave length) is satisfactory, we have to test a few more aspects or qualities of the number 55.

1. Aayam (Income)
2. Vyayam (Expenditure)
3. Yoni (Direction)
4. Vaaram (Week)
5. Amsam (Quality)

To calculate and arrive at these aspects, we have to multiply again the number 55 by the fractions, 8/12, 9/10, 9/7 and 4/9 respectively.

Location of final layout of the building



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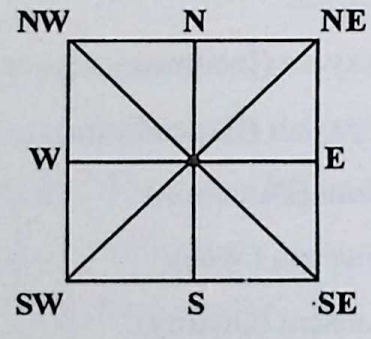
AYADAI CALCULATION:

1. Nakshatra - $55 \times 8/27 = 440/27 = 16\ ^{8}/_{27} = 8$ Poosam (already calculated).
2. Aayam - $55 \times 8/12 = 440/12 = 36\ ^{8}/_{12} = 9$ Ayam (Income).
3. Vyayam - $55 \times 9/10 = 495/10 = 49\ ^{5}/_{10} = 5$ Vyayam (Expenditure).
4. Yoni - $55 \times 3/8 = 165/8 = 20\ ^{5}/_{8} =$ 5th Yoni (Vrushabha Yoni).
5. Vaaram - $55 \times 9/7 = 495/7 = 70\ ^{5}/_{7} =$ Guru Vaara (Thursday).
6. Amsam - $55 \times 4/9 = 220/9 = 24\ ^{4}/_{9} =$ Dhanya (Blessedness)
   (See tables for benefits of Amsa and Yoni)

YONIS (Directions) indicating the passage of Energy flow.



Yoni Table	Amsa Table
1. Dwajam (flag staff)	1. Taskara - Thief
2. Dhoomam (Smoke)	2. Bhukti - Enjoyment
3. Simham (Lion)	3. Sakti - Power
4. Svaanam (Dog)	4. Dhanyan - Blessed
5. Vrushabha (Bull)	5. Nrupan - King
6. Kharam (Ass)	6. Kleepan - Ali (Neuter)
7. Gajam (Elephant)	7. Nirbheeti - Fearlessness
8. Kakam (Crow)	8. Daridran - Poor
	9. Preshiyan - Slave
Note : 1,3,5,7 are good	Note : 2,3,4,5,7 are good

SHADAYADI:

So far we have examined 6 aspects commencing from Aaya and hence this calculation is known as Shadayadi Gananam, meaning calculation of Aaya etc.

This is said to be the purification of the measure of Ayadi, which is a number.

Now let us decide upon the proportion of the length and breadth of the building proper. As decided earlier, the proportion of longer side to the shorter side is 1:1½ ; so the periphery is 2 x (1 + 1½) = 5 parts, 2 going for shorter sides and 3 for longer sides.

CONCLUSION:

The Peripheral measure is 55 and this has to be in the ratio of 1:1½.

This gives 30'.3" x 45'.4½ size.

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Hints to Remember
1. Measure of one module is 5'.2" x 3'.4 1/3".
2. May propose expansions in terms of modules.
3. Thaimanai, to retain its identy and form.

NOTE:-

I. The calculations are very simple and easy, needing no teaching. However, it is advised that a teacher's guidance may be sought for understanding the subtleties of this process and effect on human life. In the example quoted above, the author's aim is to initiate one into this area and it is not an end in itself.

II. There are two more ayaadi ganana (calculation) where 10 and 16 aspects are considered. As such they are called Dasaayaadi and Shodasaayaadi.

III. For temple structures ayaadi ganana will involve the stars of the principal donor, Naama Nakshatra of the town or village (called Vaastu Nakshatra) and the Swami Nakshatra i.e. the star of the presiding deity of the temple proposed to be designed.

IV. Similarly for calculating the heights of idols to be installed for worship, ayaadi ganana is applied. Purchase of idols from markets for installation and worship, may cause negative effects on the donor and the worshippers.

नृपकर्तुश्च वास्तूनां सर्वं सम्पत्करार्थकम्
आयादिभिरुपेतं यन्मानं तत् श्रीकरं भवेत्
अपेतं सर्वदोषं स्यात् तस्मात् आयादि सम्युतत्

— Agastya Sakaladhikaara.

"The application of aayaadi principles for arriving at relevant measures bestows prosperity on the door of the Vaastus - be it a dwelling house, temple or an imagic form. If not applied and measures purified, all sorts of problems would arise. Hence aayaadi ganana should be carried out and correct and relevant measures ascertained and made use of in the creation of objects of Vaastu".

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VAASTU PURUSHA MANDALA

INVISIBLE RULES OVER THE VISIBLES - A NATURAL PHENOMENON

Concept of Vaastu Purusha Mandala - the traditional version - The Indian Big Bang theory - Emergence of space - Energy grids - Basic patterns - Extended forms - Qualities of the energy grid - Good and bad effects on human life.

At another context, in this book, I have elaborated certain basic terminologies used in the Vaastu Shastras. They are Vastu, Vaastu, Vaastu Purusha and Vaastu Purusha Mandala, of which the scientific significance of Vaastu Purusha Mandala has been already dealt with extensively in a language that could be easily comprehended even by a common man. As regards other terms, such as Kaala Purusha, Taala Purusha, Praasaada Purusha, Naatya Purusha and Sangeetha Purusha, I have discussed at length and established their profound significance at another context. Hence not repeated here.

Now I would like to make a special reference to the popular view of the Vaastu Purusha Mandala as met with in the ancient shastras such as Brihat Samhita (5th century A.D.), Vaastu Vidya, Agamas and also Puranas. Puranas in Vaastu context, are considered as the historic epics of ancient India. The puranas are, ofcourse, replete with moral themes couched in story forms, in a mythological language, in the course of the narration of which, certain historical events and the cultural life of the people of ancient times, are found recorded. Such things need deeper study and proper interpretation, particularly of technical material that we come across in the body of the Puranic literature.

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Ancient writers of Puranas have recorded, at appropriate contexts, technical subjects also, which when compared with what exist in actual Vaastu shastras hold good and at times what is missing in the Vaastu texts are also met with.

This is how our ancient writers have preserved certain scientific material also, which has helped me immensely to understand certain difficult problems of origin, evolution of concepts, material representations and their world wide currency. For instance, the concept of Time as causal element of the universe and objects of the universe was met with in Skanda purana. During the early days, I was not able to get at it in the Vaastu or Agamic texts nor from any other source, not even in the Vedas so explicitly detailed as in the Skanda Maha Purana. This discovery enabled me to understand Aintiram of Mayan wherein I found elaborate account of the science of Time and Space.

At the outset, I would like to point out, that the Vaastu Purusha Mandala as expressed in the texts mentioned above, signifies the emergence of primordial Space and Spatial forms, from out of the Primordial Energy, held as the Ultimate and the Absolute. Though it is not openly stated as such, the significance is this. It may be stated that the explosion of Energy with enormous heat (Kaalaagni) and the consequent emergence of 'akasa' or 'akasa bhuta' is the Indian Big Bang[1] theory. Vaastu shastra, being the only scientific treatise born of Indian genius, it is no wonder that such a scientific phenomenon as this, is dealt with deeply though in a mythological language[2], and further extended into a unique science of Vastu and Vaastu.

According to Brihat Samhita[3], which is held to be earlier than the Vaastu

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1 This 'big bang' is occurring in our inner space at every minute, and in all animate beings as and when they produce sound for articulation of inner feelings or make bodily movements for gesticulation. This phenomenon takes place in the minute particle of space contained in the cave of the heart. What happens in the inner space (அகவிண்) of living beings on the Earth, also happens in the outer space, the akasa (புறவிண்).

2 In the inner space of human beings, thought-form emerges and fills the space whereby a little universe comes into existence. This is inner reality. For all these, the micro space or the atom-sized energy space has to split with fire that leads to form generation and form figuration.

3 The concept of inner space of living beings as part and parcel of the outer space of macro being and both of them possessing identical quality and behaviour, is as old as the culture of India. It is not a light statement nor a statement of speculative philosophy. It is of deep scientific truth. The use of mythological language to keep the scientific theories in memory and to pass them on to posterity is very much justified. In today's context it may look archaic or unsophisticated but it is inevitable. It is therefore opined, ofcourse supported by textual evidences, that the science of Vaastu shastra would be around 10,000 years old.

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shastras that are extent today, has to tell us a story of a Bhuta, a demonic force, producing heavy uproar, spreading the entire void with what is normally called celestial space or akasa. It is further said that the celestial luminaries (planets) called the 'devas', frightened by the monstrous form and dinning noise of the Bhuta, exerted their might on it and pushed it down. The demon fell on the ground with uproar and with his face down on the Earth. The devas occupied parts of the body of the demon. Not being able to bear the weight of the devaganas, the demon concealed himself in the belly of Lord Shiva and prayed to Him with his head on the North East corner. Releasing him, Lord Shiva gave him a boon that he would be the guardian deity of the built forms and worshipped by all human beings as and when they commence building activities and on the occasion of entering the house ceremoniously. This kind of story is met with in almost every text that we have today in the name of Vaastu shastra.

Further it is said that this demon called Vaastu Bhuta and sometimes as Vaastu Naga, Vaastu Nara, in other works is lying within the frame work of a square, with his limbs folded, but spreading the entire space. In this mythological story what is implied is that Vaastu purusha mandala is the abstraction of the space and its qualities in a miniature form and also indirectly means that this miniature space is the first manifest form of the unmanifest energy. That the Vaastu Purusha is all pervasive is signified in the spreads and folds of various limbs within the square field. The devaganas occupying the various parts of the body add another dimension to the concept of Vaastu Purusha diagram.It is the diagram of the universe in miniature. The celestial beings such as Surya, Agni, Varuna, Vayu, Kubera and similar other divine beings are brought into the complex of the Vaastu Purusha layout. In this particular miniature universe one would find them to be the forces of nature having assumed a subtle material form of sound and light with eight gunas, each guna representing a particular luminous square. These gunas are inherent ones, not to be warded off unless by a scientific analysis. This analysis is taken into consideration and doors and windows located during the design processes. To imply that the energy cell is the essence of the universe occupying the entire cell, this metaphor is employed. Further the various subtle points of the energy cell

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which later sprouts into material form is also indicated. It is just like the banyan-seed, wherein lie the qualities and form of the future Banyan tree. This is, in short, a composite cell of energy and matter. This may be restated as the 'nirguna' aspect of the energy, which while turning into 'saguna' aspect, will have the qualities represented by the celestial beings. We have the subtle qualities expressed by various celestial bodies occupying various parts of the Vaastu Bhuta. This means to say that all manifest forms of the unmanifest, flooding the universe have got certain specific qualities of good and bad, integrated solidly in the manifest material form. That is to say, the gross as well as subtle energies are not free from positive and negative qualities. The Nirguna is harmless whereas 'Saguna' is harmful in general terms. In other words, the kinetic is frought with good and bad effects on human life, while the potential is free from evil effects. The aim of Vaastu shastra is to make one understand its qualities and restore 'Saguna Vaastu' to nirguna status even at gross level. Hence the experiencing of the 'potential' or 'nirguna' is advocated by Vaastu and Agama shastras. The attempt is 'nirguna upasana' as enjoined by yogis. For instance, a wind when gentle, is breeze and gives soothing effect to all the animate beings on the Earth. The same wind when intensifies into a whirl wind or a hurricane, it produces disastrous effects on human life and settlements. In other words the Universe where we live in, is filled with good and bad energies, which we have been trying to avoid or avert by our intellectual efforts. One such intellectual creation is the 'building' meant for our protection against the evil effects of the forces of nature-gross and subtle.

Philosophers speak of Nirguna Brahman and Saguna Brahman. Vaastu Vedins speak of Vastu Brahman and Vaastu Brahman (also Vastu Purushan and Vaastu Purushan). Religion speaks of Nishkala Brahman and Sakala Brahman. Jeevatman and Paramatman are the terms used by Vedantins. Potential and Kinetic energies are the words of modern science. Subtle energy and material energy are the words of Prof.Einstein. They are all almost synonyms. In the science of Vaastu Vedins, it is the Saguna aspect of Brahman that is responsible for all good and bad that humans are fated to face in the mundane life. We are subjected to all sorts of negative and positive qualities of Saguna Brahman. The Vaastu

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shastra, being conscious of these two aspects of Nirguna and Saguna, has been successful in its effort to ward off the negative aspects and take human beings to the ambience of Nirguna Brahman within the built space. Vaastu shastras' approach to spiritual strength, peace and prosperity is scientific and mathematical. This accounts for the eternal validity of Vaastu principles.

The Vaastu purusha mandala is a luminous substantial square, two dimensionally and a cube tri-dimensionally. This is the physical form of the minutest particle of primordeal energy. This is said to be 'KARU' or 'EGG' of the space விண்கரு Vinkaru. In other words this is foetus of microscopic size. The vast space is replete with countless particles of Karu. This is what is residing in our heart which we call 'Jeeva' or 'Jeevatman'. This is referred to as 'daharakasa' (subtle space) 'antarakasa' (inner space) 'ahavin' அகவின் (inner akasa) and Ullam உள்ளம். These words are frequently used in the Vaastu tradition.

There is another concept that, in as much as earth is the offshoot of space, the earth is packed with minute particles of energy. The transfer of subtle space into gross space (earth) has led the traditional scientist to theorise, that the universe was a minutest particle at its original level possessing the quality of tranquility or peace. The earth itself, should have been a cube before it went into self spin. Hence all particles of gross matter at final level are discovered to be spherical in form. That Vaastu purusha, the embodied energy cell is squarish is attested by the statement that''वास्तुपुरुषः चतुरश्र संस्थः'' "Vaastu purushaha chaturasra samsthaha". The meaning is that Vaastu Purusha lies enclosed in a square. So says Vaastu Vidya, a text on housing architecture. How and where it emerges from, is stated in an Agama text, by name 'Marichi Samhita' of Vaikhanasa order. This phenomenon occurs as follows. This comes under the yogic practice of doing Pranayama 'प्राणायाम', where we inhale and exhale prana or life breath at a particular measure.

''प्राणायामेन विकशित हृद्कमलान्तराकाशे
वैश्वानर शिखामध्ये चतुरश्रं हेमाभं बिन्दुनासह''.

"Praanaayaamena vikasita hrid
kamalantarakase vaiswanara shikha
madhye chaturasram hemabham binduna
saha".

"When we inhale and exhale life breath, the space residing in the heart expands and from that emerges the cosmic fire (bluish in shade) at the tip of which erupts a bindu (particle of energy or light) squarish in plan and of golden hue".

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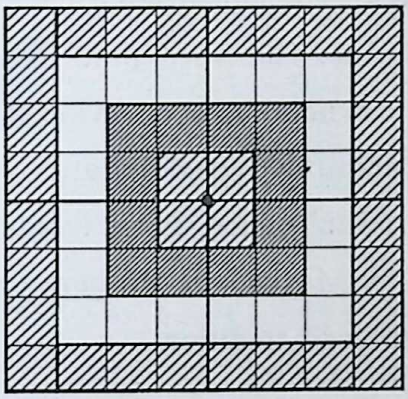
There are two basic types of Vaastu purusha mandala, one of 8 × 8 = 64 squares and another of 9 × 9 = 81 squares. The former one is called Mandukapada and the next one Paramasayika or Chanditapada. The Manduka is said to be 'Sukshma' (subtle) and the Paramasayika 'Sthula' (gross).

The purpose of this chapter is to provide the traditional grid pattern of these mandalas and to show the concentric belts of comprising the mandala[1]. The pada devatas seem also to be found in the diagram of typical house patterns appended in this text. They are as follows:

MANDUKA VAASTU MANDALA

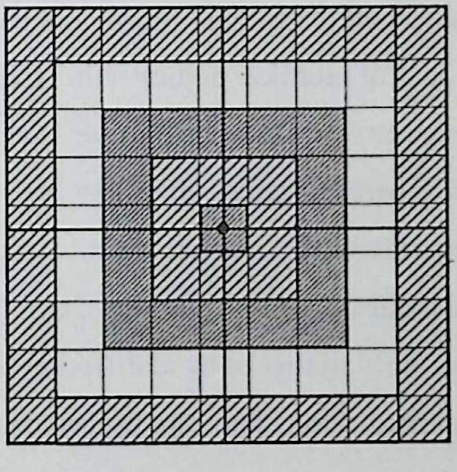
8 × 8 = 64 modulated spaces



Brahma pada (the first belt around the central energy point)	:	2×2=4 padas
Deivika pada (the second concentric belt)	:	12 padas
Maanusha pada (the third concentric belt)	:	20 padas
Paisachika pada (the fourth concentric belt)	:	28 padas
		64 padas

PARAMA SAAYIKA VAASTU MANDALA

9 × 9 = 81 modulated spaces



Brahma pada (the first belt including the central square field of energy)	:	3×3=9 padas
Deivika pada (the second concentric belt)	:	16 padas
Maanusha pada (the third concentric belt)	:	24 padas
Paisachika pada (the fourth concentric belt)	:	32 padas
		81 padas

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1 The Vaastu Purusha Mandala as shown above, pertains to one typical mandala with a grid as illustrated in the diagram. This mandala, with the grid, is an enlarged size of the minutest particle of energy (called paramanu). The vast space is filled with such countless particles of energy and each one, as such, will have a grid of 8 × 8 = 64 at subtle level and 9 × 9 at grown up level (i.e. at material level). Logically it would mean that all such Vaastu mandalas put together, would result into a big Vaastu purusha mandala which is nothing but VISWA PURUSHA MANDALA i.e. the structure of UNIVERSE OR COSMOS. Tri-dimensionally the universe is a big cube at primal level and spherical at gross level, designated as Brahmanda. Hence all earthly particles (atoms) are spherical. These particles are also called Karu, from which another significant word, namely, Karukkal (foetus stone) கருக்கல் was evolved. This has come to be called Karungal கருங்கல் (black stone) later by virtue of its colour. Similarly, the words செங்கல், வெண்கல் (red stone, white stone) have come into vogue, while all of them are karu essentially.

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These padas are interpreted as consisting of concentric square belts (conduits for flow or energy) going round the central core-space with a concentrated energy centre called 'Brahma bindu' or Brahma padam, (this point is OM, a composite element of light and sound). The adjacent belt is called Deivika padam, (the field of luminosity) the third is Manusha padam (the field of consciousness) and the fourth and the last one is Paisachika padam (the field of grossness-matter). These are all traditional names for the various categories of spaces, the scientific significance of which are dealt with elaborately in this book at different levels of interpretation. They are indeed primary wave patterns[1] emanating from the inner space of individual beings and from the outer space of universal being, the cosmos. It may be noted that the order in the primary pattern is said to be the order inherent in the universe. This order is 'dharma' technically called 'Vaastu dharma'. In Tamil it is நெறி nerri which means order. The order of 9 × 9 is denoted by 'manidama nerri' மனிதமா நெறி (order of gross human world) and 8 × 8 is denoted by 'Punithama nerri' புனிதமா நெறி (order of the subtle universe). In Tamil, the word 'manitha' means man or human being and 'punitha', the divine. The word 'punitha' புனித is used to denote subtle or divine substance and 'manitha' மனித denotes gross or material substance. These two terms are used by Mayan, the Progenitor of the Vaastu Vedic tradition.

These concentric square belts look like the one as shown in the diagram. But at atomic level, they would be wiry (linear) - a bundle of energy wires woven into threads running parallel

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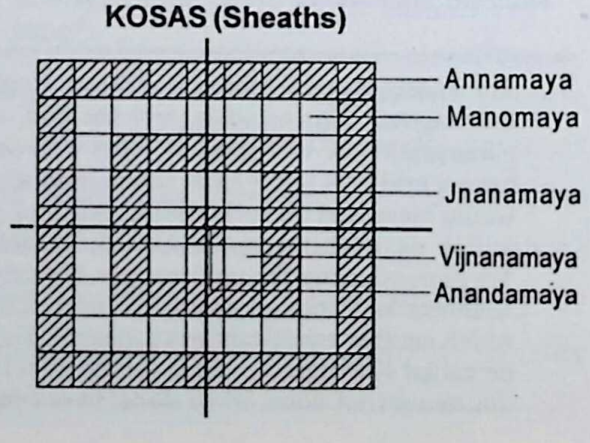
[1] The concentric belts have another set of names starting from the outer most paisachika belt namely: Paisachika Pada - Annamaya Kosa; Manusha Pada - Manomaya Kosa; Deivika Pada - Jnanamaya Kosa; Brahma Pada - Vijnanamaya Kosa; Brahma Bindu - Anandamaya Kosa. This anandamaya kosa is a point or bindu where actually experience takes place. This is indeed OM - whether light or sound unless this point is reached - when we hear or see anything - nothing would become intelligible. Everything emanates from this point and spreads all over the mandala and everything seen or heard converses to this point. So meaningful and subtle, this point is.



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9 × 9 = 81 spaces
Parama sayika energy grid

Vayu				Soma					Esa
29	30	31	32	33	34	35	36	37	
28	9			10			11	38	
27		4				5		39	
26								40	
Varuna 25	8			1			12	41	Surya
24								42	
23		3		2		6		43	
22	7						13	44	
21	20	19	18	17	16	15	14	45	
Niruti				Yama					Agni

PADA DEVATAS (energies personified)			
1	Brahma Pada	24	Pushpadanta
2	Vivaswan	25	Varuna
3	Indra	26	Asura
4	Yakshma	27	Sosha
5	Apavatsa	28	Papayakshma
6	Savita	29	Vayu
7	Jaya	30	Naga
8	Mitra	31	Mukhya
9	Rudra	32	Bhallata
10	Prithvidhara	33	Soma
11	Apa	34	Bhujaga
12	Aryama	35	Aditi
13	Savitra	36	Diti
14	Poosha	37	Esa
15	Vitata	38	Parjanya
16	Gruhakshata	39	Jayanta
17	Yama	40	Indra
18	Gandharva	41	Surya
19	Brungaraja	42	Satya
20	Mruga	43	Bhrisa
21	Niruti	44	Antariksha
22	Douvarika	45	Agni
23	Sugriva		

to each other and also diagonally from corner to corner. In Tamil this particular 'knot' முடிச்சு mudichchu is called 'Brahma Granthi - energy knot. Hence they are called 'Rekhas' (रेखा) in the shastras. The diagonal rekhas are called 'Rajjus' (रज्जु) - all denoting lines or conduits or nerves for flow of energy. In short, Vaastu purusha mandala is a bundle of energy lines (conduits) packed inside the cube, the flow of which takes place in an order which gives rise to orderly form in the world of reality.

Now let us go into the individual spaces (padas) and the names given by the shastras to signify the qualities materially.

Further, there are 32 types of Vaastu mandalas (vide next page for names of individual 'mandala-patterns' ranging from 1×1, 2×2, 3×3 ..... 8×8, 9×9, 10×10 ..... 31×31, and 32×32 and they are classified under two major categories, one of even numbers and the other of odd numbers. If you examine all, it would be found that 8×8 and 9×9 patterns would be basic, wherefrom other patterns would look as though have sprung into multiples and shrunk into fractionals, the area of the square

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remaining the same, in terms of modulated spaces or grid. As earlier discussed, all odd numbers represent gross material forms and all even numbers represent subtle material forms. From this statement it must be clear that at both the levels (subtle and gross), there is matter and there is form. The only difference is that at subtle level, the form is invisible whereas at gross level, the form is visible. The term 'Paramasayika' therefore means that which is 'well-laid out', 'well-settled down', 'consolidated', 'frozen' or 'well materialized'. The significance of 'manduka' will be elaborated at another context as it is a common grid representing 'light space' and 'sound space' (Vaastu Vinyasa and Swara Vinyasa).

From the foregoing discussions, on and about Vaastu purusha mandala, it may be clear that the whole universal space is a macro Vaastu purusha mandala in as much as every particle of space called Paramanu (atomic particles) is a little universe in logical, mathematical and scientific terms. If space is tridimensional, every particle and the whole universe itself is a cube. I have named the smallest particle of space as microbode and the universal or macro one as macrobode. Within this abode there exists the Vastu in energy form. This I believe is the nuclear energy as identified by modern science. The particle of energy contained in this abode is indeed the cosmic fire, which when aroused extends upward into a shaft called Brahma sutra. This is, as identified and stated by Mayan as Brahma sthambha, Moola sthambha, Moola thoon (மூலத் தூண்), Kaala thoon (காலத் தூண்), all indicating a pillar of fire. This shaft of fire in man or any animate being is the shaft of consciousness which keeps the animate beings in perfect equilibrium, physically, mentally and spiritually. These facts of spiritual science are applied in residential building-technology, as well as in temple construction technology. This is applicable to commercial buildings also. The self-spin and movement of this shaft of fire or thread of consciousness is signified in the Dance of Shiva[1].

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[1] The Shiva linga is the moolasthambha as recognised by the Vaastu science. Hence Mayan says that सर्वलीयं लिङ्गं आकाशमेव 'that which resides in all beings and the linga are but akasa (energy space)'.
The space with a macro or micro size as discussed above has the plan of a square out of which arose octagonal and circular forms. This fact of science is signified and justified in the Gudi mallam Shiva linga, (of Andhra pradesh) which is erected on a stone slab, carved with 8 × 8 = 64 squares of manduka mandala. By this it is clear that shivanaala (the cylindrical shaft) शिवनाल indicates a scientific theory of evolution of

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This particular central space called Brahmasthan or bindu has become a very vital point in building technology, which is signified in the open courtyard provided in the traditional house pattern. This particular part is therefore invariably protected or kept unbuilt and disallowed for any living purpose. Hence the saying ब्रह्मस्थानं विना सर्वेषां वासयोग्यकम् (Manasara) - all spaces other than the central field of Brahman (energy) are fit for human habitation (also see chapter on Brahma sutra).

Coming back to the textual matter on mandalas, under the chapter on Padavinyasa lakshana, we have enormous material of which some salient points are recorded hereunder for the benefit of students of traditional art and architecture.

Further, there is a reference in the Vaastu Shastras to whom and to what purpose certain padas are to be used. Under the circumstances, Ekapadam is the basic square-space which is luminous and without a grid. This is the primal manifest form of the unmanifest energy or energetic primordial space. This is pure space, attributeless Vastu Brahman. So this is prescribed for the seat of Guru, seat of the high priest who does yajna (यज्ञ) and

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primordial energy into space, expressing eight gunas (eight qualities). The gunas are represented by the 8 squares of the manduka grid and they are personified into what is called 'pada devatas' meaning 'luminaries contained in the modulated minor spaces'.

Shiva linga exhibits the concepts of Om sound and Om light turning into linear sound 'Naada sutra' and linear light 'Brahma sutra'; Naada - is sound, Brahma - is light. The 'Brahma' is energy otherwise called Bindu, Teja bindu, Vindu, etc. Linga nala is a composite of naada and vindu (Sound and Light).

Naada is the root or seed of sound form. Vindu is the root or seed of light form. (aural form and visual form) roots of word and meaning. (वाक् and अर्थ). In saivite religion वाक् - Parvati, अर्थ -Parameswara. Parameswara - male principle, Parvati - female principle. The composite product is the material universe that is personified in the concept of Muruga. Hence Muruga went round the material universe while Ganapati moved round his father and mother (the subtle universe). 'Om' is verbal substance that develops or grows into form - visual and aural. 'நாத விந்துகளாதி நமோ நம' (naada vindukalaadi namo nama) says, Arunagiri nathar, a devotee of Muruga/Subrahmanya.

In the Vaastu Shastra, the chapter on 'linga peeta' is separate from that of 'linga naala'. The peeta is called pindika, the materialised form of earth that is, the material world. The space (linga) is resting on the earth! The peeta is also denoted by the term 'YONI', meaning the female organ in geometrical form. It signifies matter and material earth, which also contains energy inside. Capable of flowing out into out side space. The plan of this peeta is also given in the text, as square, octagon and circle, which again signifies the evolution of space into matter or material earth. While I am saying all these, there is an important point to be let known to scholarly and scientific world of research.There was no pindika originally around Shivanaala. There was only linga nala erected at the centre of the main sanctum. This is called मूलस्थान which I have been saying as Brahma Sthanam. This fact can be noticed in the shore temple of Mamallapuram and Gudimatham (Andhra Pradesh). This is the original concept of Shiva as मूलस्थम्भ moola sthambha, where it is repeated the science of evolution of space-atom from square to circle. The Brahma sutra is also indicated on the face of the cylindical part of linga by a vertical line as if emanating from a coil, which later on came out more visible into the form of 'naagaa bharana', put as ornament to the Shiva linga.

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one who performs pooja or yoga. Sages who occupy peeta (Peetadhipatis) of a particular culture, should have his seat square in plan, so that he may experience oneness with the supreme being - a direct communion with the absolute power. This is indeed the seat of the Divine. The vibration emanating from this luminous seat, may be stated as one or Eka taala in musical terminology. In Vaastu technology of space it is Eka taala or unitary time-space. This eka taala, in western musicology, is called tempo. This Eka pada is called Sakala pada in Vaastu, since it is the primal space or field of energy or spring board for all later forms to sprout. Before this form appears, it is said to be formless, since the form is invisible to our inner eyes[1]. But the subtle meaning for nishkala or formlessness is that it still possesses form but not visible, just like the seed containing the essence of Banyan tree, not visible as such at that stage.

Why this? This is because, the tree exists not in visual or full fledged material form, but exists in qualitative form. On account of this concept the Vaastu says that it is quality that takes form. This is called गुणचित्र குணவடிவம் Gunachitra - material form of the quality. This concept of 'guna' (quality) taking forms is the keynote of iconographic and iconometric forms in Vaastu and Shilpa. This is the reason behind creating multi-forms of god and worshipping them in temples when we are firm and conclusive that there is only one God. This is the reason behind worshipping Vaastu-based buildings like temples and other material forms, in Indian culture. The worship of multiforms[2] is justified in this concept of quality and corresponding material form. These qualities, I am referring to, are numberless but they have been compressed or classified under three gunas namely Satvika, Rajasa and Tamasa, while 'Satvika' is subtle and 'Tamasa' is gross. The quality of 'one God concept' exists in tranquil state which is explained as a state of 'being' and not 'becoming'. This is actually the

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1 This is to say that our consciousness goes to rest. It is a state of non-consciousness. This is the state of existence of Brahman, unaffected by Time. This is otherwise called 'state of samadhi', when scientifically interpreted.

2 There are eight basic gunas. They are the attributes of Bhutas - Pancha bhutas - space, air, fire, water and earth and also Light and Sound and Time, which multiply into 16, 32 and 64 gunas. These are represented as Parivara Devatas in a saivite temple.

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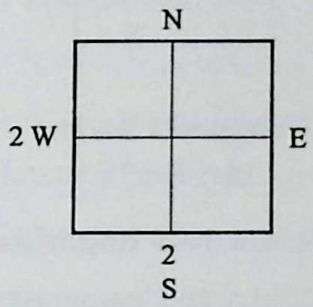
meaning behind the Eka-pada (single luminous space with no grid on it). So fundamental and so divine it is, that it is called Brahmapadam. In modern scientific language it is the Primal manifest squarish wave pattern of the unmanifest (a luminous geometrical square form) and it is 'mc²' as identified by me.

As regards other patterns, the 2 × 2 = 4 pada of pechakam is to be used for deities who ward off evil effects of spatial forms. Further, that pada is the area for installing Shiva linga, which Pada is the plan of the Brahma Sthambha or Moola Sthambha. It is also stated that the anthropomorphic Siva - forms can also be erected on that space of four modules.

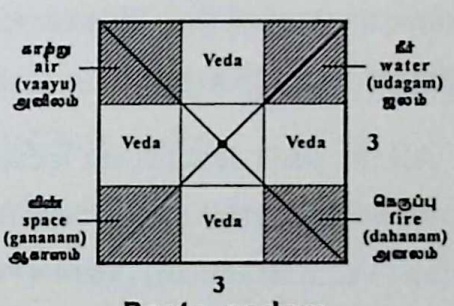
पैशाच भूतविषग्रहरक्षकास्ते[1]
पूज्याहि पेचकपदे चतुरश्रयुक्ते ।
तसिमन् विधेयमधुना विधिना विधिज्ञैः
शैवंतु निष्कलमलं सकलंचयुक्त्या ।।

— *Mayamatam Chapter 7, Sloka 23.*

The meaning is that in the pechaka pada the Sthapati should invoke and worship the gross forces who would offer protection to the occupant of the space. The subtle and gross forms of Shiva can be accommodated in this space.



There is another pada consisting of 3 × 3 = 9 padas, where we come across the elements such as water, fire, air and space of which the earth is composed. Earth, in this context, is the supporting element of the four elemental substances.



Peeta padam
3 × 3 = 9

Supporting sloka from Mayamata runs as follows;

अथ पीठपदे नवभागयुते
दिशिदिश्यथ वेद चतुष्टयकम्[2]।
विदुरीश पदाद्युदकं दहनं
गगनं पवनं पृथुवी हयवधिः ।।

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1 To get protected from gross, demonic and negative forces, the mandala with 4 quarters are suitable for pooja purposes.

2 In the field of 9 padas the four corner spaces are occupied by the four elements namely, water, fire, space and air and the spaces set in the cardinal directions are occupied by the four vedas. In the Vaastu context, the four vedas are - Sabda Veda, Gandharva Veda, Natya Veda and Sthapatya Veda. Earth is the supporting element.

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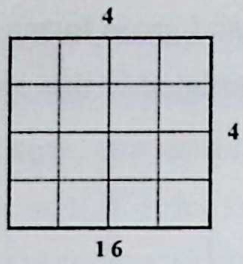


Mahapeeta padam
4 × 4 = 16

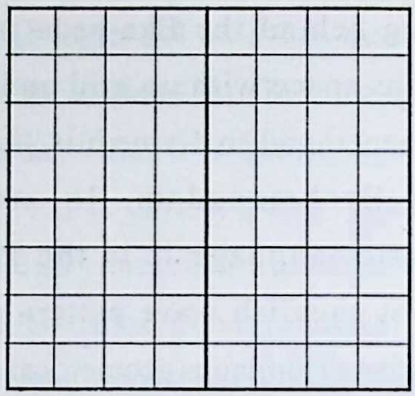
There are two important padas called 'manduka' and 'paramasayika'. Of all the padas 'manduka' is said to be very important (पदानामपि सर्वेषां मण्डूकं चापि तत्परम्) and the Paramasayika (chandita) for all types of buildings (चण्डितं सर्व वस्तूनां आहत्यं च यतस्ततः).

They are drafted here with pada devatas as stated by Mayan in his Mayamata Vastu Shastra.

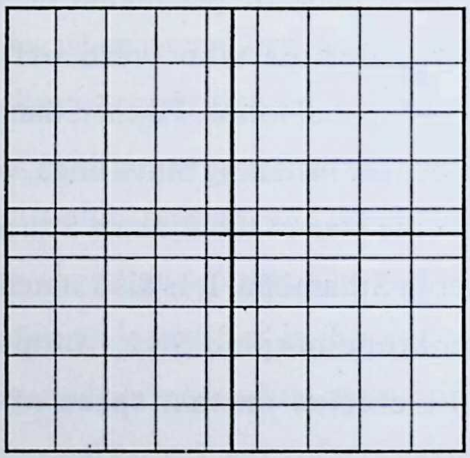
All the pada devatas are located so as to face the central pada occupied by Brahma (Vastu Brahman) (ब्रह्माणं च निरीक्ष्यैते स्थिताः स्वस्व पदेऽमराः).

Just underneath the pada vinyasa of manduka and paramasayika patterns, the posture and structure of Vaastu Purusha (the energetic cell) is described. He is composed of

(1) 6 back bones (वंश)
(2) 1 heart (हृदय)
(3) 4 marmas (मर्म)
(4) 4 siras-nerves (शिर)



Manduka Pada
8 × 8 = 64 spaces



Paramasayika Pada
9 × 9 = 81 spaces

षट्वंशमेकहृदयं चतर्मर्मं चतुशिरम् ।

Vaastu purusha with all these interior features, lies on the earth dwarfed and hunch backed with head on the east.

मेदिन्यां वास्तुपुरुषं निकुब्जं प्राक्शिवं विदुः ॥

The role of Vaastu purusha mandala in art and architecture is unique and varied. The principle of rhythm as applied in music and dance as also in poetical

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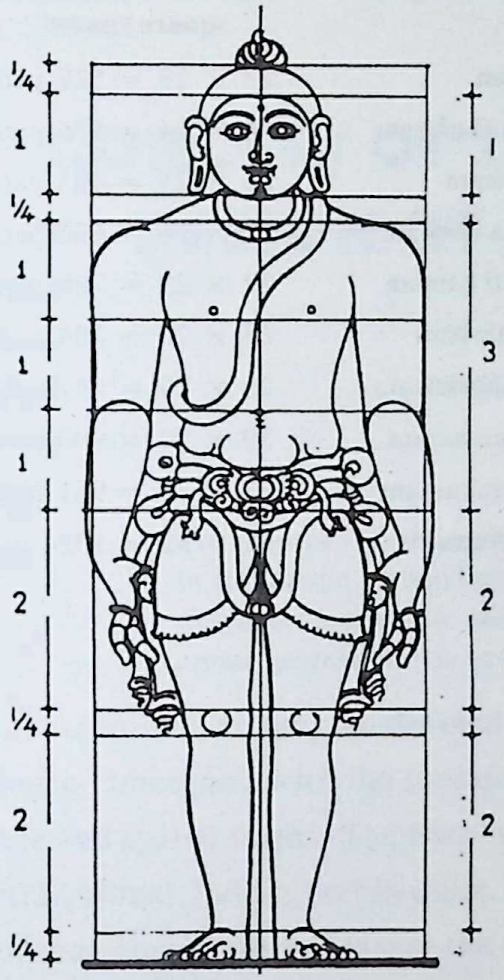

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compositions is extended to creation of spatial forms with tridimensional effect. The appreciation of this concept and its application in buildings and other forms needs a little knowledge of 'swara' and 'swaragjnana'. And above all, to acquire mastery over the process of application of the time-space concept, one has to work under a traditional architect well-versed in the concepts and application in the conventional and creative works. Mere reading of books and blind application will lead to faulty results.

In actual practice, the Vaastu purusha mandala is applied for temple buildings, house buildings, town and country layouts, in the making of sculpture cars and chariots, as well as furniture.

The grid of even padas is called युग्मपद (yugma pada) and that of odd padas is अयुग्मपद (ayugma pada)

युग्मं हि निष्कलं प्रोक्तं
सकलं तु अयुग्मं ....

We have already referred to mandalas starting from 1×1=1 pada and ending with 32×32=1024 padas (modulated square spaces). They are detailed here under,

Name of the pada	Number of modulated square spaces
Sakalam	1 × 1 = 1 padas
Pechakam	2 × 2 = 2 padas
Peetam	3 × 3 = 9 padas
Mahapeetam	4 × 4 = 16 padas
Upapeetam	5 × 5 = 25 padas
Ugrapeetam	6 × 6 = 36 padas
Sthandilam	7 × 7 = 49 padas
Mandukam	8 × 8 = 64 padas
Paramasayikam	9 × 9 = 81 padas
Asanam	10 × 10 = 100 padas
Sthaneeyam	11 × 11 = 121 padas
Desiyam	12 × 12 = 144 padas

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Name of the pada	Number of modulated square spaces	Name of the pada	Number of modulated square spaces
Upachanditam	13 × 13 = 169 padas	Visalam	23 × 23 = 529 padas
Bhadram	14 × 14 = 196 padas	Vipra Garbham	24 × 24 = 576 padas
Mahasanam	15 × 15 = 225 padas	Viswesam	25 × 25 = 625 padas
Padma Garbham	16 × 16 = 256 padas	Vipula bhogam	26 × 26 = 676 padas
Triyutam	17 × 17 = 289 padas	Viprati kantam	27 × 27 = 729 padas
Vrita bhogam	18 × 18 = 324 padas	Visalaksham	28 × 28 = 784 padas
Karnashtakam	19 × 19 = 369 padas	Viprabhaktikam	29 × 29 = 841 padas
Ganitam (Suryavisalam)	20 × 20 = 400 padas	Viswesasaram	30 × 30 = 900 padas
Susamhitam	21 × 21 = 441 padas	Eswarakantam	31 × 31 = 961 padas
Supratikaantam	22 × 22 = 484 padas	Indrakantam	32 × 32 = 1024 padas

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23

CONCEPT OF TIME AND SPACE AND DESIGN OF BUILDING SPACES

The Science underlying Vaastu Purusha Mandala and its application in the design of buildings, village and city layouts. Extension of this concept to dance, music and poetical compositions. Time-units create graceful forms in traditional architecture.

Architecture may be defined as a science concerned with the creation of space and spatial forms. The term 'space' in traditional Indian architecture is of profound significance. Mayan, the great scientist of India has defined architecture as the one that signifies the zenithal achievement of mathematics, which he further says is rooted in the Absolute Time. In the words of Mayan, கட்டிடக் கலையே கணக்கியல் உச்சி" "Kattida kalaiye kanakkiyal uchi". 'காலக் கூறே கணக்கியல் ஆகி" "Kalakkoorey kanakkiyal ahi". The second line means that mathematics has its roots in Time and multiples or fractions of Time-units. In the course of further discussions, these scientific theories would be elaborately dealt with. The above quoted statements of Mayan are of very great significance, since they go deep into the very roots of science itself. To what extent these statements would be relevant and intelligible to modern architects, it is for the readers to realize and remark. The concept of space of the Vaastu tradition transcends the physical spaces that one is conversant with, under normal circumstances.

Normally, the word space denotes the earthly space or land chosen for a village or town or a ground chosen for a building. Similarly, a building-space is another term which means an area of land-space, defined or demarcated for a building to be erected. But a space within a building is the area partitioned by the inner walls, which give, rise to smaller and

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larger sized spaces, depending upon the usage. Normally, the area occupied inside the building is called 'inner space' and the land surrounding the building, the 'outer space'. These are actually gross spaces, according to material science.

The usual practice, with respect to the arrangement of living spaces as well as utilitarian spaces inside the building is to apportion spaces on the basis of practical needs and conveniences of the occupants. This is called configuration of spaces in a building. In this process, there is always the use of convenient measures to satisfy the needs of the occupant. There is also the concern of the land-holder for maximum utilisation of the available space. Under the circumstances the distribution of spaces within the building may become congested or clustered. **In such cases, where the arrangement is not in order, the building is bound to become sick creating physical and mental problems leading to various ailments.** Western researchers are also of the view that such situations arise in a building not only due to lack of ventilation and light, but also due to lack of proper design of spaces. You would be astonished to hear that they have gone many a step forward and firmly say that **well defined spaces have the quality of curing ailments and promoting health. They call it 'SPACE THERAPY'.**

On the other hand, the concept of space and space-design according to traditional science of Vaastu and its practice in human context is totally different. A traditional designer is initiated into a grammar of visual forms arising out of energetic spaces, just as we are all led into the grammar of sound forms arising out of the same spaces for our interaction with our community. We achieve this through our words, phrases, metaphors and sentences. Every 'Vak' is a 'form'. Every 'form' is a 'Vak'. Hence 'Vak' and 'artha'-to use poet Kalidasa's words-(they) are spatial forms, pin pointing one and the same experience. Meaning is the essence of thought-form which diverts into two forms namely 'speech' and 'form'. It is the 'meaning' that is experienced in both ways. This is the basis on which Indian Architecture is mounted. In as much as we have a grammar for aural forms, so we have a grammar for visual forms. **The principles and measures required for the construction of a word is the same as for the material form, so far as Indian Architectural forms**

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are concerned. Is this not looking strange? Actually a word is a picture - a three dimensional form. If so, what is the science behind word formation? How a word is generated is still a mystery. What is the structure of a word if it portrays a three dimensional form? This is what every one of us has missed to explore. This is the point that has been analysed by Mayan in whose name we have today a science of Time and Space called AINTIRAM, traditionally known as Aintira Vyakarana which lay at the root of the grammatical works of Indian languages. The secret of Indian languages being spirit centric, lies in this Aintira Vyakarana. Mayan has given a mathematical solution to the structure of word-forms. As the evolution of a word-form is governed by a theory of construction so the visual word, the architecture is also governed by the same theory. This is the knowledge of construction, hence "Sthapatya Veda". This, in general terms, is called the law of Nature. All objects of Nature being three dimensional figures - the thought, feeling and form that are internally experienced by the 'Cosmic Being' take material form in the world outside, in the same numerical measure and pattern. The process involved inbetween experience and expression is a mathematical problem which Mayan has identified and given the same in the Vaastu shastras in terms of numerical measures followed by rules and regulations to create a replica of the inner form. We say that we paint our ideas in word-forms. The visual forms occur outside as internally experienced, through the medium of 'matter' which 'matter' is subtle when it appears in the inner space and 'gross matter', when it appears in the world of reality. Similarly the sound forms are expressed outside as experienced internally in the medium of sound which is also 'matter' though subtle. In both the cases the experience that takes place at our inner level are all material forms seen internally with our so called 'inner eyes'. What is that which is called 'matter' after all? This is 'substance', called Karu (கரு) in Tamil. This is further elaborated as 'விண் கரு' 'Vinkaru' meaning 'substance of the space'. In physical sense, it is the foetus or 'virile semen' of the cosmic space. This is 'bindu' or 'beeja', to quote Sanskrit equivalents. Bindu is a dot or point, as meant by the word புள்ளி (Pulli) in Tamil. जलबिन्दु निपातेन क्रमशः पूर्यते घटः 'small drops make a pool'. This 'substance' is Vastu वस्तु or परवस्तु and when the same changes into materialized form, it is

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Vaastu वास्तु. For the Vastu to take variety of forms, the creative force is काल (Time) and the material is 'sound' in the case of word form and 'light' in the case of visual form. What is seen in luminous form inside, is expressed out into the world in aural and visual material forms respectively. Therefore वस्तु is subtle and वास्तु is gross. It is from a subtle वस्तु particle that our Earth has evolved into वास्तु. Hence प्रधान or मुख्य Vastu."धरा प्रधान वस्तु स्यात्", so say Mayan and Manasaran. In other words, 'Earth' is the well grown-well developed-primary or primitive substance or matter. Hence Mayan calls it 'மண் கரு' 'man karu' meaning 'earth foetus'. So it is 'விண் கரு' 'Vin karu' that turns into மண் கரு man karu. This is 'akasa tattva' and 'prithvi tattva'-the science of the 'subtle space turning into gross space'-the science of the वस्तु turning into वास्तु. Hence the equation वस्तु रेव वास्तु. In the modern scientific language it is E that is equal to mc^2, $E = mc^2$. Is this not correct? This is विज्ञानम् Vaastu Vijnaanam. Is this not surprising? To make the phenomenon of aural or visual articulation intelligible, a kind of order or beauty is caused or imposed by 'Time', the orderly vibration of the 'inner essence', that is our 'inner space' - அகவிண் ahavinn - अन्तराकाश antarakasa. This orderly vibration is called 'RHYTHM'- சீலம் (seelam in Mayonic Tamil). 'Time' here is nothing but our 'consciousness'. So 'consciousness' is Brahman, the Kaala Brahman. In Mayonic term it is காலமாக் கடவுள். This Kaalam exists 'in' and 'out' of all physical objects - கடந்தும் உள்ளும் இருப்பதால் 'கடவுள்'. That is, the Tamil term கடவுள் 'Kadavul' signifies that this 'consciousness' exists inside our body and also outside our body as vibrant conscious space. A comprehensive and most meaningful word, for god, is கடவுள் Kadavul that exists in Tamil. Therefore 'Kadavul' is a scientific term for our God. It is Kaalam that is, in other words, called Kadavul. This is the Mayonic concept of God. This subtle idea or form is 'nurppam' நுற்பம் which is turned into Sirppam சிற்பம் in Tamil and finally into 'Shilpam' in Sanskrit. The theory of subtle turning into gross forms, Nurppam turning into Sirppams is summarised in the Shilpa Vidya Rahasyopanishad as जगद् सर्वं शिल्पमेव भवति - all objects of the universe are shilpams, aural and visual forms. Further, if there is no language of form or a grammar of visual words, the experience that should be created by the speaker in the inner space of the listener, would be

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nil. From this it may be evident that the creation of form and its reflection on the opponent is a scientific phenomenon and hence of profound significance. We may call this phenomenon 'resonance' or 'response'. So to make our ideas resonate in others, is really a problem - precisely a mathematical problem. As a corollary, good forms based on mathematics create good responses whereas distorted or random ones create bad effects on our psyche or we are confused. So traditionalists are of the opinion, that 'order' in expression causes 'sweetness and light' in experience, in addition to creating deep impression of the subject in the mind. The search for 'order' led into a grammar of visual as well as aural articulation. The grammar of visual forms is known as Vaastu Shastras which guide the designer to design the building and the inner spaces in harmony with the vibration or quality of the inner self of the individual or a family. (This aspect of subtle space and its characteristics and also its impact on human life is dealt with in the succeeding pages.) The contribution of the designer to the physical and mental welfare of the individual or a family, in this process, is considerable and relevant even in contemporary context, the neglect of which will lead to miseries. These are bound to happen inspite of one's likes or dislikes. None could escape saying that one has no eyes or ears for such a phenomenon. This aspect of space and design is denoted succinctly by the phrase 'to live in harmony with subtle nature' - not merely with gross nature.

The Vaastu Shastras are therefore concerned with not only **earthly space** but also three other spaces namely the **inner space** dwelling in the human body, the outer space or **cosmic space** by which all living beings are surrounded and finally the **built space** which is the space enclosed by the building. Of the four spaces one is gross, two are embodied and the fourth is subtle and free. Scientifically, all of them are energies, though limited in three cases and free in one case. In this context the traditional designer's responsibility is very heavy and onerous. So he has to bestow attention on all the four spaces, before he offers the final design to the owner of the building. He has to work out a harmony among all the four spaces, for which the Vaastu Shastras have provided him with a unique formula.

There is another fact of science that one interested in vaastu spaces should

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note. The space, according to Vaastu tradition is not two dimensional but tridimensional. Spaces are volumetric whether they are enclosed or free. So **vertical space** is also equally important.

It would be astonishing to hear further, that the Vaastu Shastras have identified a unique quality or dynamism in the subtle spaces as well as in the gross space namely the earthly space. Superficially, the Earth is looking like a spherical ball composed of dead matter. But according to Vaastu science, the Earth is a living organism in the heart of which is concentrated enormous quantity of energy.

The terrestrial space and the celestial spaces are energies, the former being gross matter and the latter subtle matter; the former contains matter inside, whereas the latter contains energy inside. Mathematically the former is a substance with E in M and the latter with M in E, hence equal, qualitatively and quantitatively. This energy permeates every individual atom of the Earth. Added to this, the Earth is endowed with the power of self-spin and forward movement to go round the Sun. It may be pointed out here, that the Earth is self conscious and hence goes into self-spin. We are also self conscious and we also go into self-spin by virtue of which we speak or do. This retrospection we have missed to realize. This self-spin attests to the inherent dynamic quality of the Earth.

Added to this phenomenon, the energy radiates from the centre of the Earth and spreads all over the Earth's surface creating certain patterns of energy waves. Modern science has revealed that it is a pattern of luminous grid. This goes by the name of a German scientist Dr.Ernst Hartmann - as Hartmann grid - who with sensitive instruments has discovered the formation of energy-grids on the surface of the Earth, (quoted by Dr.Prabhat Poddar, Scientist, Aurobindo Ashramam of Pondicherry). The Vaastu science is already aware of this subtle phenomenon. If I say so, none would believe. But in fact it has gone a step further into the very subtle space of the universe and also into the subtle space contained in human form as well as in the built-form and discovered the existence of squarish energy-spaces or energy-grids.

The inner space of human beings is not a space of nothingness, but it is a space filled with enormous energy. It inheres further a rare capacity to

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experience and vibrate its experiences into aural and visual forms. In other words, whatever the inner space experiences, in its attempt to articulate the experience, it transforms itself into sound and finally into aural forms. There is a mathematics underlying this process of form-generation or transformation of sound energy into intelligible material sound form. Similary, the experience which takes place in the inner space of human beings is a luminous form which we are able to see with our own inner eyes and which is turned into visual forms of reality by the effort of the inner being or inner space. In this effort, the inner space produces wave patterns of which the primary pattern is of a square-form and later blossoms into a square-grid of energy consisting of 8 x 8 = 64 smaller spaces. This is a common pattern of grid irrespective of the thought form, that occurs in the inner consciousness. This pattern is designated in the tradition as 'Vaastu Purusha Mandala' where 'Vaastu Purusha' means material energy and 'Mandala' a diagram. This is also called 'Vaastu Pada' meaning material space which may be either luminous space or sonic space. The identification of the dynamism of the inner space turning into energy-grid is an apex discovery of the Vaastu Science of Sthapatya Veda which serves as a basic pattern for all designs of buildings as well as for the layouts of towns and cities in traditional architecture. A building is a magnified and actualised Vaastu Purusha Mandala, with a lot of energy particles packed into it. The building encloses a part of the cosmic space which, as observed earlier is filled with particles of energy, each in the form of Vaastu Purusha Mandala. This mandala is a miniature universe and hence the universe is a magnified form of Vaastu Purusha Mandala. This is elaborated further in the succeeding discussion. This concept and its extension to creation of material forms, accounts for the traditional creations being addressed as miniature universes (pinda). In fact, every particle of energy and every object of the universe is a miniature-universe called microcosm. So it may be stated that the traditional designer creates microcosms or miniature universes in the buildings he designs and in the variety of forms he creates, in the domain of art and architecture. In as much as the space is

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identified to be the source of all visual and aural forms of reality, the 'Vaastu Purusha Mandala' is identified to be the basic layout/source structure/for all patterns of life to get structured initially, later evolve materially and eventually come into the world of visual reality.

It is common knowledge that the space dwelling inside all animate objects including that of human beings is a part of the outer cosmic space. This cosmic space is filled with countless particles of energy. Each particle of energy is a space (Paramanu-space) and it is also identified to possess the same quality of experiencing and vibrating the experiences into patterns of 'energy-grids' and energetic forms. From this it is evident that the whole cosmic space is filled with countless Vaastu Purusha Mandalas. Logically, it may be observed that the whole Universe is based on a macro sized Vaastu Purusha Mandala composed of 8 x 8 = 64 macro sized modular spaces. In the context of spaces being defined as three dimensional forms, logically it would mean that the Universe itself is a big cube composed of 8 x 8 x 8 smaller sized cubes! To aid further understanding, I would like to draw your attention to a scientific truth, yet to be known to modern science. Our planet, the Earth is looking spherical by virtue of its high speed. If, the Earth is brought one day to a stand still, logically the Earth would return to its primal form of a big cube! All objects of nature originating from the particle of energy (Paramaanu) started from the pattern of a cube, and because of their self spin with enormous speed they become spherical. In the material world, they are therefore found to be spherical. To be cubical or squarish in plan, is stated to be the inherent nature of the energy particle when it is in vibrant stillness. By virtue of this quality of the cosmic space splitting itself into smaller spaces of uniform sizes, it is to be noted that **there exists an order in the Universe - subtle universe and material universe.**

If so, who causes this order, in the cosmic space as well as in the micro spaces that dwell in the living beings? This power is attributed to the consciousness of the cosmic space as well as of the inner space of the animate beings. This consciousness by its personal effort to express its own inner feelings, causes a

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kind of vibration or pulsation in the inner space resulting into energy-grids. This energy-grid is the basic layout within which all thought forms are accommodated or structured, before they are let out into the world of reality as full fledged visual or aural forms of beauty and utility. The vibration or pulsation, being the causal element of all these event, is called Time[1] in the Vaastu science. It is the Absolute Time and this causes or creates life on Earth. In other words, the vibration in this context causes the energy to split into sparks and spread into the vast space of the cosmos. So, space is the offshoot of the vibration of the primordial energy. This is how the space was born. So, in this traditional science of Vaastu, the vibration is an important and basic element of the cosmos for all visual forms to take shape and evolve into orderly and lovely forms of life. In fact, these spatial forms in the shape of cubes come together in a numerical order of 8 x 8, unifying themselves finally into an orderly structure of 8 x 8 x 8 and then developing into aesthetically pleasing forms. In this process, the consciousness, through vibrations, causes into existence tangible and intelligible forms, in tune with its inner feelings or experiences. The awareness of the outer space (also applicable to inner space) continues with a control and vigil over the vibrations, by virtue of which set rhythms are produced leading to the formation of rhythm bound spatial forms. In fine, it is vibration that generates space and again it is the space

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1 Time, in the Vaastu tradition means Kaala. This is actually the force of energy aroused by the inner consciousness. The speed with which the Kaala emerges from within the energy is vibration. The energy cannot change into space if there is no Kaala. Hence it is stated to be creative element of universal space-Viswakarman. When this is disciplined and brought into an order, it becomes what is called 'orderly speed' or Taala or rhythm as expressed in the technical tradition. The rhymic vibration, either of sound or matter produces well structured pleasing forms. This is what is happening in the name of universal creation. In the religion, the phenomenon of Time is signified and personified as the aspect of Kaala. काली त्वं कालस्वरूपी says the shilpis of India and worship Kaali as their community god. The best examples are the Kaali Kottam of Kancheepuram and Kaalikambal Kamateswara temple, Madras. These two temples are owned by them. They are very old. In all big kshetras (temple cities) one would find either Kaali or Kamakshi temple belonging to traditional shilpis. Later, this aspect gave rise to Ankala Parameshwari, Mariamman and Kaliamman in Tamilnadu. The male aspect of the creative power is Viswakarman of Vedic origin. Since the shilpis follow the principle of creation as noticed in the universal vibration and codified in the Vaastu shastra (grammar of creative forms), they came to be called VISWAKARMAS. Viswa is akasa denoted by खम् in Sanskrit/Prakrit from which emerged words like खम्मकार and कर्मकार - Khammakara and Karmakara meaning Viswakara or Viswakarma. Of course beyond this lies the Brahman - the nirguna brahman, the attributeless - called Viswa Brahman, when precisely expressed.

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that vibrates and causes spatial forms, just like the vibrations of a stringed instrument producing sound, sound-space and then sound forms, in consonance with the thought forms that occur in the inner space of the player. To be brief, it is Time that blossoms into forms. Mayan, the author of Vaastu tradition says that the universe itself is the product of Time, and everything in this universe has its root in Time. The following sloka from Skanda purana (Nagara Patala of the old edition) attests to the fact of Time causing material forms to come into the world of reality. The next one of Mayan gives a wide spectrum of the creative activities of Time in simple but thought provoking words.

From Skandam:

काल: सृजति भूतानि काल: सम्हरति प्रजा:,
सर्वे कालस्य वशगा: कालो तस्य वशेस्थित:।।

The meaning is that Time creates material objects of nature. Time destroys all objects so created. Everything rests in the hands of Time. But that Time rests with the ultimate - Energy or God.

Mayan's verse runs thus:

காலமே எவைக்கும் மூலம்
காலமே மூல ஆற்றல்
காலமே கோலத் தோற்றம்,
காலமே சூலத் தோற்றம்
காலமே விந்தை செய்யும்
காலமே நுணுக்க மாயும்
காலமே அணுக்கம் ஆயும்
காலத்தின் ஆற்றல் என்னே.

The gist of the above verse is that Time is the source of all objects of nature; Time blossoms into the universe; Time splits itself into minute fractions; Time works wonders; Time gives rise to atoms; Time-atoms come together to form time-spaces and Time causes space to turn into spatial forms. Don't you feel that it is time that metamorphoses into space and spatial forms? Yet, this is a fact. This is realized and revealed by the Indian science of Mayan.

The Time, by virtue of possessing this creative power, is rightly called Kaala Brahman or Kaala Purusha. This Kaala is primordial and responsible element for the emergence of the universe as Mayan says. We may call this Time, the **'universal time'** as opposed to relative or physical time that we have, for our day-to-day earthly activities. Kaala, the Time is the force of energy causing waves and contributing to the growth of living forms. Further this Kaala resides in all living beings, accounting for the growth or aging of individual forms and also for their dissolution. The concept of **'time'** and

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its proper understanding or realization of its independent existence and influence on human life comes to one, only at the death of a human being. Hence there has come a metaphor in Tamil காலமாகி விட்டான் Kaalamahi vittan-disappeared into Time, had become time, denoting the death of a person. Correspondingly in the Sanskrit tradition we have a metaphor परमपदं अवाप्नुयात् reached the high space, celestial space, to indicate the end after the expiry of a person. With respect to the individual being, Time is absolute and independent. Everything in this universe and even the universe itself is an animate being and hence influenced by 'Time'. So Time is the creator, sustainer and destroyer-says Mayan[1]. What is unique in Mayonic science is the introduction of the concept of time (time-units) in the creation of architectural and sculptural forms and making them behave with life. So anything produced by shilpis using the vaastu measures and principles would become living organic forms. Finally we can also say that the primordeal Energy is reduced to NUMBERS.

The discovery that the frequency of vibration of energy causes space and spatial forms, has led to wonderful achievements in the domain of dance, music, poetry, sculpture and architecture. The trees and plants, birds and animals as well as human beings grow by virtue of the rhythm of the inner space and not by food alone. The rhythmic growth of material bodies is noticeable very visibly in the growth of bamboo, sugarcane, palm and similar other species. Every other life form grows in this order. They are called biological rhythm in modern science. Man is not responsible for the growth of life-forms, including his own form. It is the work of Time, the Kaala Brahman. This rhythm is quantified as 8, and multiples of 8-that is, from 0 to 8^1, from 8^1 to 8^2, from 8^2 to 8^3, from 8^3 to 8^4 and from 8^4 to 8^5 after which a tangible form results. This is the order of the growth of material forms in Nature. The result? - multiple forms of bewitching beauty.

This rhythm of 8 x 8 is that which is represented in the grid pattern of Vaastu Purusha Mandala. This is the basic pattern as well as the pattern of the universe. It is called 'manduka pada' meaning 'frog-space'. This manduka pada grows in leaps

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1 காலமே ஆக்கும் காலமே காக்கும் காலமே துடைக்கும் - மயன்
काल: सृजति भूतानि । काल: संहरति प्रजा: ॥
सर्वे कालस्य वशगा: । कलोतस्य वशेस्थित: ॥ - Skanda.

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and bounds just like the leap of the frog. This is about its movement and corresponding expansion and growth of form. There is another subtle meaning in naming the grid as 'manduka pada'. This manduka, (frog) is of course, a simple being found on the banks of village ponds and reservoirs. But what is unique about this simple being is that it has the gift of hearing through its eyes. It has no ears. So it is that one organ which functions as eye and ear. Just like the frog, the 'manduka pada' layout is a common layout for sound to change into aural forms as well as for light to change into visual forms. This epithet is very apt and scientific, in the sense that both sound and light have a common source and a common pattern of layout. This is the scientific reason for word and form going parallel in form as well as in sense.

You must be knowing that the serpent is also blessed with eyes to see and also to hear through eyes. It has no ears*. Accordingly, in the layout of manduka type, there is a tradition to put a serpent around the outer belt of manduka layout, instead of Vaastu Purusha, in human form. Hence, it is indeed very approriate to name the Vaastu Purusha Mandala as 'manduka pada'. In Tamil, Mayan calls it தவளைமா நெறி - meaning 'order of the frog'.

The identification and realization of this kind of unique characteristic in the universal being, and in the animate beings has led the creative designer to evolve a grammar for creating visual form as well as aural form along the lines of the universal law governing form figurations.

The concept of Time and its inherent ability to cause forms has helped Mayan, the progenitor of Sthapatya Veda to extend this theory to the domain of music, dance and poetry and establish a marvellous technological tradition in each of the field and extend the same theory of rhythm to the field of material expressions, namely art and architecture. This Kaala is known as Taala in the technological tradition of dance, music and poetry which is extended to art and architecture, where 'taala-mana' dominates the design processes. Taala is time-unit and it produces pada, the space—of sound and light. This taala

* கட்செவி / கண்ணே காதாகப் பணி செய்கிறது.

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produces 'speech rhythms' in poetry and gives a well structured form to the thought expressed in the composition. The same taala is employed rhythmically in the creation of building spaces and forms. Interestingly there is a technical saying to the fact that the architect builds a house in the same manner as a poet builds up a poem - கலைஞன் வீட்டைக் கட்டுகிறான் கவிஞன் பாட்டைக் கட்டுகிறான். This analogy is of profound significance in Indian Architecture.

Every time-unit produces equal sized space or pada, paramanu-time causing paramanu-space. So logically and quantitatively 'taala' and 'pada' are one and same. In other words, Time and Space are equal in measure. In as much as bodily spaces and sound spaces are created by time-vibration (rhythm), material spaces and spatial forms are created in the field of art and architecture in terms of time-units. This is a very great discovery of Vaastu science and all creations by shilpis are anchored only in this scientific concept of time and space. (See also discussion under the chapter on 'Tala systems of spatial measures'.)

From these discussions it must be evident, that there is a basic structure called Vaastu Purusha Mandala which is the source-pattern or common pattern or universal scale for all living forms to get measured and structured, and to take shape. This basic pattern is taken as the master-layout for all the material forms that the tradition of Vaastu conceives and designs, be it a building or any form that it desires to give shape to. This is the ruling element in the chapter on 'pada vinyasa lakshana' - meaning 'elaboration and extrapolation of spaces' in the Vaastu texts. In musical parlance this is 'swara vinyasa'. Pada means both material space and sound space. We know that words imply forms and they have their root in OM sound, whereas material forms have their roots in OM light, not in OM sound, for sound forms are replicas of the inner luminous forms caused by the vibration of light. Form precedes word in as much as light precedes sound. There is an interesting piece of information in the Mayamata Vastu Shastra which gives us an impression of a very wide coverage of sound technology and light technology implied in Vaastu creations. In the older text of Mayamata of Maya, it is evident that there must have been a comprehensive discussion on Pada Vinyasa related to both material space and

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sound space, since the title 'swara vinyasa' (elaboration of sound space), occurs in the अनुक्रमणिका (contents of the text) whereas the title 'pada vinyasa' is used inside the text. This may be perhaps, due to the assumption that the people of his times were aware of the inseparability of the twin concepts and the subject he had to deal with in the text was only material space. From this it is clear that the science or grammar of visual and aural forms are one and the same. Under the circumstances, that which is applicable to material spaces- 'pada vinyasa' - is applicable to 'swara vinyasa'. This needs further research by scientists. This will be a rewarding attempt. Scholars doing research in music in the universities can also take up this issue. What I mean is, that from the material pattern of pada vinyasa such as 1x1, 2x2, 3x3, 4x4 ... 8x8, 9x9, ...32x32 the equivalent sound patterns could be ascertained. The stringed instrument "Veena" will aid this process of discovery. Sound and light are indeed their raw materials and Time is the creator which is implied in the Vedic term Viswakarman, meaning creator of the universe. If you look into the whole phenomenon you would come to the conclusion that it is consciousness (प्रज्ञा / உணர்வு) of the Energy that has metamorphosed itself into Time, space and spatial forms*. In short it is energy or feeling that has manifested itself into forms or objects of nature. This is confirmed by the Vedic statement प्रज्ञानं ब्रह्म. 'prajnanam brahma', meaning consciousness is Brahman. Since consciousness is Time, we can conclude that by 'prajnana' Kaala Brahman is implied. Hence we shilpis say that the science of Vaastu is rooted in the science of consciousness and manifestation. How noble, exalted and subtle is this science of Vastu and Vaastu? This is the kind of Brahmajnana, Brahmanubhava that is associated with Vastu jnana and Vaastu jnana that the shilpis of Bharat have been holding all these years from the dawn of civilization on Earth. On this basis the

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* The concept is that the space is filled with light particles. These are called விண்அணு / விண்கரு Vin Anu / Vin Karu - space-atoms / space foetus. They are in other words 'seeds of the universe'. By a process of metamorphosis the subtle light particles turn into gross material particles. Hence the terms மண்அணு, மண்கரு Man Anu / Man Karu. The extended concept in this context is that in as much as material particles (மண்அணு Man Anu) are dense in the earth, the subtle light particles are dense in the space. மண்அணு Man anu is the metamorphic form of விண்அணு Vin anu. 'விண்னே மண்ணாகிறது' Vinney man akirathu - meaning 'It is the celestial space that turns itself into earthly space'.

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KOVILOOR MADALAYAM

Indian civilization is said to be spiritual and on that account never dying - never ending.

As regards built space, there is an interesting concept worthy of note and admiration. So far, we have discussed about the qualities of the inner space, outer space and the earthly space as possessing the power of going into vibrations. We all know that within the built space, the cosmic space is enclosed, in as much as the same space is enclosed in our body. By virtue of the building enclosing this space, the building becomes a living organism and it also vibrates like our inner space. Now, the designer has to calculate the vibration of the space to be built and that of the individual who will occupy the built space. The building and the occupant of the building are called scientifically 'embodied energies'. By a calculation, the vibrational measures are numerically equated. If they are of the same numerical measure, they respond to each other and the occupant experiences harmony and peace in the built space. This is just like two veenas pitched at one particular point of frequency of vibration in the ladder of swara sthanas, resonating in harmony with each other. This concept is very subtle and of great practical value to the creative designer. In this phenomenon of resonance there is increase in the volume of sound. Logically, this means the growth of sound energy. Similarly there is corresponding increase in the growth of the spiritual energy of those who live in the environment created by Vaastu spaces. This is spiritual growth and wellbeing.

The modern science has ignored or discounted the space as one of the five elements since the space, though filling the entire Universe including the laboratory of the scientist, is not to be subjected to any physical test. It requires inner search as well as a search in the outer world and the space surrounding the world. It is really a wonder how a scientist is not able to attempt and realize this concept. It needs no big lab or enormous fund. My own impression is that unless the scientist is a creative designer, marker and a builder, it won't occur to him.

Therefore the modern science is of the view that there are only four elements and not five. But the Indian traditional science has taken only this space as the primary subject of inquiry. The science of Vaastu is therefore anchored in the

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concept of space as a dynamic element, out of which all objects of nature come into being and into which all merge and disappear ultimately.

The Vaastu purusha mandala is of two basic types. One is called 'manduka pada' and the other 'parama sayi pada'. The 'manduka type of mandala' of (8x8) 64 spaces, is said to be the subtle (sukshma) since the experience in terms of forms occurs at the level of our inner consciousness. This is called inner vision or swanubhava. This inner vision appears in a pure state of inner luminosity. The raw material with which it is generated is 'light' - the inner light (உள்ளொளி-ulloli). We may call it luminous material. Hence this experience is internal and personal also. What is experienced under such circumstances gets expressed into two streams-one aural and the other visual. For aural form, sound is the raw material or medium which is available in the inner space itself. By bodily efforts, the luminous form gets aroused into sound and into sound space and finally into sound structure. What we have to note in this context is, that sound becomes audible only when the sound space assumes three dimensional structure. This gets modified into materialised speech form; which gets reflected in the inner space of the listener, provided the reflected image is in accordance with the listener's internal order. The reaction is 'response' or understanding. This is a scientific phenomenon. This experience, being subtle, (sound is subtle matter) disappears as soon as it is uttered or articulated. So all sound forms and luminous forms occurring in the inner universe disappear instantaneously, into the space dwelling in the heart.

But all objects of nature - trees and plants, birds and animals including human forms are all visual material forms. They do not suffer instantaneous disappearance unless forced by special circumstances. They normally take time. They stay on for sometime on the Earth and disappear into the space from which they originated. Who gave this gift of longivity to such visual forms? It is indeed the basic "luminous form" that has become materialized-that is, the form that has taken a material existence-the basic raw material being the 'spiritual light' which appeared at the level of inner consciousness. What is interesting in this context is that the 'inner light' has become a hardened material just to give a stable

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form and longivity, though even this is short lived. The countless particles of light, of which the 'inner light' is composed, gets hardened by the effort / speed of Time, the process of which is governed by an internal order or scale. This scale is identified to be 9 while the corresponding layout of spaces is 9x9. Does not this look like another Vaastu purusha mandala for the material form to get structured into material form? Yes, this is actually the Vaastu purusha mandala that our Vaastu shastras ultimately mean and recommend for all mundane creations. This is called **'Parama Saayi pada',** meaning the *"well laid out space"* or *"well organised pattern of grid"*. What is actually implied in this process of a particle of space developing into a form (either at subtle level or gross level) is the phenomenon of **'metamorphosis'** that takes place for the 'subtle' to turn into 'gross'. The 'turn of the subtle into gross' or 'turn of the 8x8 into 9x9 digits' or turn of the manduka pada into parama saayika pada is technically called 'Pranava', a technical term of very deep significance. Pranava is split by Mayan into Piral (பிறழ்) and Nava (நவ) where 'piral' means 'to turn into' or 'to transform into' and 'nava' means nine. This is extendable to sound forms also. Does not this mean that it is OM that turns into Form? Yes, it is therefore held in the tradition that OM signifies Pranava. Remember, 'OM' is a verbal form!

There is another scientific event which is of paramount importance and significance. What is that event? To produce a visual form whether subtle or gross, 'measures' are very important. Measureless forms are indeed amorphous forms and they carry no meaning at all. They won't be intelligible to the observer or listener. So to make the forms visible or audible, well structured and pleasing to see or hear, the measure is offered by our own inner being by means of its pulsation or vibration. This vibration or frequency of vibration was earlier denoted by the term Kaala measure or Taala measure as the vibrations are quantifiable. Therefore, Time provides measures for our thought to take a well defined form. From the level of consciousness to that of visibility, it is Time that vibrates, it is Time that evolves and it is Time that sustains and it is Time that causes the disappearance.

We have already discussed about the structure of the minutest particle of

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space being cubical with a plan of a square. Mention was also made of the square as the primal manifest form of the unmanifest. It was also stated to be a luminous square. Though the primal form is square, in the actual world of reality we have countless forms. But the tradition have broadly classified them under three basic patterns of which one is square and the other two are octagon and circle. What would be astonishing to hear in this context is that these three patterns represent three basic gunas or qualities. The theory is that it is guna that takes form. So, the pattern of square represents 'sattva' guna (peacefulness/ tranquility), the octagon the 'rajo' guna (activised state/dynamic) and circle, the 'tamo' guna (gross) respectively. The question that would be raised in this context is that on what basis these qualities are attributed to these forms.

Again we have to revert to the discussion on the quality of the particle of light, the luminous cube, which is the structure of OM light and OM sound. Earlier we have seen that the particle of energy (Parmanu) has the tendency to go into consciousness, giving rise to vibration. For this the particle goes into self spin. Hence the basic square form undergoes physical changes. On account of this spin, the square, changes into octagon and finally into circle. They respectively exhibit the attributes of Sattva, rajas and tamas. Only when the particle of space is tranquil and peaceful, experience takes place at the inner level. The next two stages represent the stages of form-growth. Tamo-guna is the guna of the matter - state of material existence - not darkness or dullness. In the technological treatises on Vaastu, these fundamental forms of square, octagon and circle are denoted by the terms Nagara, Dravida and Vesara, respectively each representing a guna.

नागरं द्राविडं चैव वेसरं चेति तत्त्रिधामतम्
सात्विकं नागरं तत् स्याद् राजसं द्राविडं स्मृतम्
तामसं वेसरं चेति त्रयं ब्रह्मादि दैवतम्

(Shilparatna 16 - 40 to 42)

In the religious architecture, to create harmony between the guna of the temple form and that of the deity to be put up inside the sanctum, the aspect of guna of the building is studied and corresponding imagic form is enshrined. For human dwellings, the square plan or its extended form, namely rectangle, is recommended by the shastras. Man, from time immemorial has been in quest of this

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peace only. This peace is made possible in the square building or a rectangular building. That is to say that the energetic space enclosed in a square building or room, creates an ambience conducive to peaceful living. The application is dealt with separately and illustrated by typical layouts appended to this text for readers' benefit.

The principle governing a square or rectangular layout is extended to village, town or city planning. A village, town or city can be defined as a vast area of layout consisting of smaller layouts of house plots. Or in other words, a village or city is a cluster of Vaastu Purusha Mandalas, with houses arranged in an order with major and minor roads, streets and lanes. Even in Temple layouts, the spatial rhythm is employed taking into consideration the layout or plan of the main sanctum as the basic rhythm and introducing multiples and fractions of the major plan for the prakaras. What would be surprising is that even pillar dimensions, their width, height etc. are governed by the modular measure of the main sanctum. In other words the term **'alaya'** means a rhythm bound spatial form - where **'a'** *(ஆ)* means samantat समन्तात् (everywhere) *எங்கும்* and **'laya'** means rhythm. Alaya is a space filled with rhythmic spaces. This is the concept by which the universe itself is **'alaya'** *மஹாலய*, mahalaya, Prapanchalaya, and **'alaya'** is a mini universe.

உள்ளம் பெருங்கோயில்
ஊனுடம்பு ஆலயம் (திருமூலர்)

Thirumoolar, the author of a text called Thirumantiram has defined temple, using two significant terms. One is Perunkoil and another is, *ஊனுடம்பு* physical body. Those two words are occuring in one and the same sentence. The meaning is that, **the cave of our heart,** where the subtle energy exits is **perunkoil** and the **material body** permeated by the subtle energy is **udambu** or physical body. Such a fine statement, no where we are able to meet with.

However, we have equally a good statement of Upanishad saying देहो देवालयः प्रोक्तो जीवो देवः सनातनः This means that our body is temple (alaya) and our life energy (Jeeva) the everlasting element, is Deva, the God. Similarly, another Upanishad says "आत्मानं विद्धि शरीरं रथमेवच" This is interpreted as "the atman (Jeeva) is the rider of the chariot and the chariot is the material body."

But, when speaking on the designing of temple structure, one Vaastu Shastra of Mayan makes reference to the unified field of energy and matter - energy

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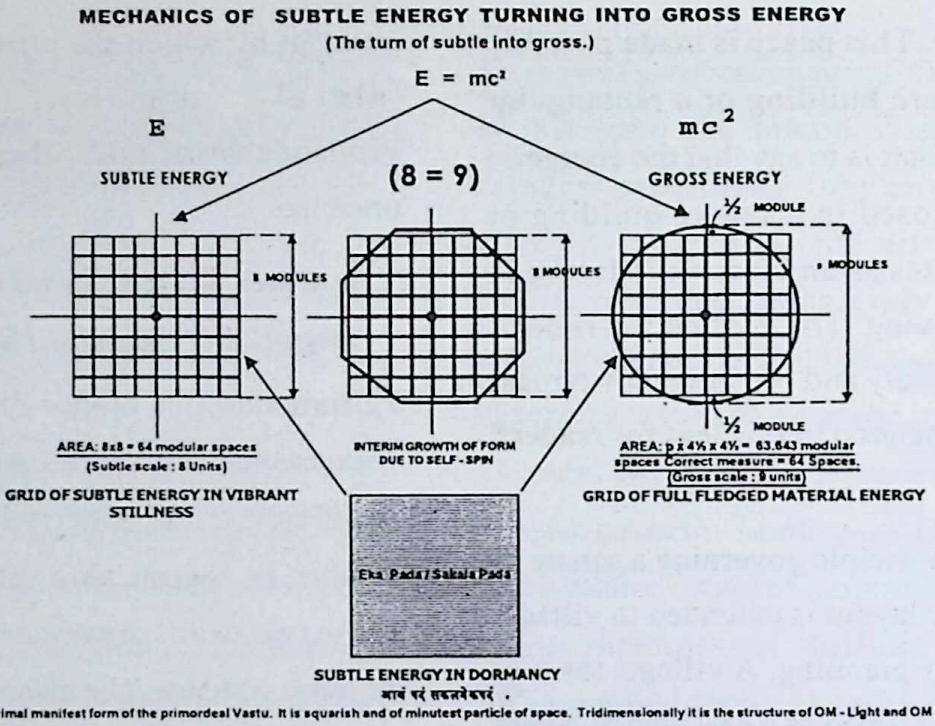

The Primal manifest form of the primordeal Vastu. It is squarish and of minutest particle of space. Tridimensionally it is the structure of OM - Light and OM - Sound.

is the space enclosed in the temple cell and the temple structure is the form carved out of matter. Infact, it equates energy and matter very scientifically.

विमानादीनि वास्तू नि वस्तुत्वाद् वस्तु संश्रयात्।
तान्येव वस्तुरेवेति कथितं वै वस्तुविद्बुधै : ।।

The meaning is that "all Vimanas are Vaastus (embodied energies) because they are enclosing energy (space) inside. In another sense, Vastu and Vaastu are one and the same." This concept is extended to all kinds of buildings by another authority, Maharishi Manasara where he uses the word Prasada (building) in the place of Vimana. This extension, led to the emergence of what is called 'Residential Architecture' in the Vaastu Shastras.

It will be interesting to note here, how energy turns into matter without the loss of either energy or matter, even volume and area (vide drawing above). This is born of the genius of Mayan, the great scientist of Bharat, who lived during the days of Jamboodweepa (நாவலந்தீவு), the island that has existed prior to Bharata Varsha.

On the diagram above, the □ cube of energy, by virtue of selfspin, turns into sphere O, the former being subtle and invisible and the latter, gross and visible. Indirectly, this phenomenon unravels the birth of earth as also other planets and earthly forms including man on earth. This science is further elaborated in the flow chart appended in this text book.

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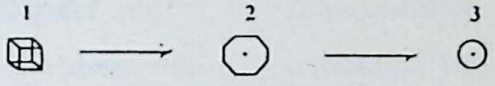
DYNAMICS OF SPACE

(EXPERIENCE turns into EXPRESSION)

CAUSAL ELEMENT is TIME

Space experiences and vibrates into form. The solid cube of energy explodes (poetically it is melting like a wax on heat) and splits itself into a grid pattern called Vaastu Purusha Mandala. This is also the inner order of the universal being. Due to self spin of the Vaastu mandala wave-patterns representing gunas are generated. They are as follows.



Subtle cubical Anu	Polygonal Anu	Spherical Anu
Satva guna	Rajasa guna	Taamasa guna
(Still)	(Dynamic)	(forceful)

After expression is over, the grid restores itself into a cube of energy attaining stillness or tranquility. Series of such explosions and implosions occur in the inner cube or space. [What occurs in the inner space also occurs in the outer space.] This inner manifestation is called enlightenment vision. This is the form that is repeated or replicated into the world of reality by physical efforts of a traditional Architect. This is SHILPA / VASTU. Hence,

'जगत् सर्वं शिल्पमेव भवति'

सर्वं खल्विदं ब्रह्म

विज्ञान शिल्प कौशल्यम् • शिलपात् प्रतिमाः जायन्ते

--- Certain points to better understand the process —

1 The cube (of energy) is the structure of OM light and OM sound*. This alone experiences and goes into self spin - goes into action - emerges into Time - turns into three basic forms - square, octagon and sphere - technically called Nagara, Dravida and Vesara forms.

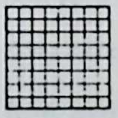
2 Experience takes place only when the cube is still and luminous. This is gridless unitary anu, unified form, unified field of energy. The next development is that of the grid in the body of the subtle cube. On this grid, occur all thought-forms very sharply, tridimensionally and in perfect order. This is inner experience or inner vision. This is replicated, into the material world by the Shilpi.

3 The moment, the feeling to express erupts, the manduka grid blossoms into existence. The feeling of expression is consciousness. This is Time (Kaala). It is movement. It is Time that moves into form at subtle inner level and later at gross level.

4 To develop this subtle into gross form, the square mandala goes into self spin producing heat and finally turns into another mandala of 9 x 9 units.

5 The turn of the subtle (8 x 8) into gross (9 x 9) is called 'PRANAVA', which signifies the turn of 'egg into chick'.

8 x 8

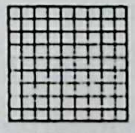


वास्तु पुरुष मण्डल

Vastu Purusha Mandala

(MANDUKA GRID)

9 x 9



वास्तु पुरुष मण्डल

Vaastu Purusha Mandala

(PARAMASAYIKA GRID)

This mandala is the plan of the universe (macrocosm) and also of the microcosm. They are tranquil and enjoyable. The Vaastu science has adopted this plan for the house-building, temple building and village and city layouts and creates little universes on the Earth. The polygonal and circular forms are agitative and revolutionary and therefore disallowed in the design of living spaces. The traditional pattern of a house is therefore a paradise on Earth where an individual lives in peace and bliss. This 'paradise lost' is to be re-gained for the spiritual and material prosperity of the entire human race.

☐Square is the primal manifest form of the non-manifest. This is 'Sakalapada' / 'Ekapada' / unitary space without grid. With grid laid on it, is designated as VASTU PURUSHA MANDALA, signifying the inherent order in the structure of microcosm and macrocosm. The tri-dimensional cube is the KARU (egg) and this gets magnified into universe. This is taken as the basic form/basic pattern of a house. This is called Garbhagriha or Bindu griha. *OM is verb as it grows into form. OM is an active mono-syllable.

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24

EFFECTS OF SUBTLE & GROSS SPACES ON HUMAN SYSTEM (PHALASRUTI)

Space enclosed in a building or built space is productive of good or bad effects on the occupants - To ward off bad from good is the aim of all Vaastu based designs - The micro cosmic plan of the energy cubes that pervade the universe is the element that is responsible for the negative and positive forces that affect human life. Vaastu Purusha Mandala with its grid does have therapeutic qualities too - They would heal our mental and physical afflictions - All earthly problems also get solved by the qualities of the individual spaces or spatial energies in a grid - This is just like the qualities of 7 colours, as also infra red (Agni) and ultra violet (Esana) rays of the Sun, affecting every individual being - The benefits are called Phalasruti meaning summary of good and bad effects. The invisible rules over the visibles.

वास्तु शास्त्रं प्रवक्ष्यामि लोकानां हित काम्यया
Vaastu shāstram pravakshyāmi lokanām hita kāmyayā

The aim of Vaastu science and connected technology is to bring peace and bliss to mankind in addition to earthly comforts and prosperity, not only to the people going to the temples (devalaya) but also to the people living in Vaastu buildings (manushyalaya). The major principles for both are one and the same. This aspect is the keynote of all Vaastu texts, expressed during the course of discussion of each subject or collectively at the fag end in this text.

There are two shastras that have explored and collected all such effects and benefits and accommodated them in a chapter headed as 'Phalasruti' फलश्रुति meaning, **effects of shastraic principles of design and to prevent human kind stumbling into pit falls.** This is the end of Vaastu knowledge and effect of the application of Vaastu principles. They are discussed here, as elaborated in Brihat

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Samhita of Varahamihira, which is an encyclopedia of subjects of cultural importance and significance. Vaastu Vidya, which deals exclusively with Building Vaastu (Griha Vaastu) is also an important treatise in this respect. It also contains enormous material on phalasruti.

Agama shastras, where Vaastu material is the keynote, also discuss about the effects of temple buildings and worship of imagic forms in a chapter on **prayaschitta** or **jeernodhara**. This aspect is mostly assigned to Agamas as they are concerned with maintenance of temples and images of gods and goddesses, after consecration. On the otherside, Vaastu shastras are concerned with creative activities - construction aspects - from earth work excavation for foundation upto the establishment or installation of buildings or installation of temples and idols, which is succinctly denoted by the epithet "कर्षणादि प्रतिष्टान्तं" **'karshanādi prathishtāntam'**, meaning, "from ploughing of the land upto conscecration". This is the part played by the designer and builder, i.e. Sthapati of traditional mould. The aspect of maintenance is assigned to the high priest, as implied in the epithet प्रतिष्टादि उत्सवान्तं and ऊत्सवादि प्रायश्चित्तान्तं **'prāthishtadi utsavāntam and utsavādi prāyaschitāntam'**, meaning "from the stage of consecration to conduct of festivals and thereafter to repairs, renovation and rehabilitation." The former is the creative aspect of Vaastu, while the latter is the maintenance aspect of the benefits of such creations. What would be revealing or surprising, is that all are meant for the welfare and well being of human beings living all over the world, not restricted to the land of their origin. It is not sectarian as criticised by uninitiated scholars of today. God and god forms are universal principles represented in anthropomorphic forms and if worshipped, good things would happen. Hence, the phrase "लोकानां हितकाम्यया" **"lokānām hitakāmyayā"**, meaning, "for the comfort and fulfillment of aspirations of humanity."

Again, we have to go back to the primal manifest form of the unmanifest, that is, Vaastu Purusha Mandala, with all its energy grids ranging from 1×1 to 32×32 with the basic form of 8×8 and 9×9. Let us take up the Paramasayika mandala of 9×9 which is complete and exhaustive in treatment. This is gross grid called **'manitha maanerri'** மனிதமான நெறி

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meaning, 'order of human form', where as 8×8 is called **'punitha maa nerri'** புனிதமா நெறி meaning, 'order of the subtle or sacred form.'

In the succeeding drawing on the next page, one would find the energy grid of 9×9=81 squares of equal meaures, but assigned to different demi gods or devas meaning simply luminous objects similar to the egg/seed born of the primal energy, the **Moolam**, which egg shoots forth into chick/plant later on visually in accordance with the vibrational measure (rhythm). The seed-stage is an intermediate stage between invisible and visible stages. That is to say, that they are all neither visible clearly with all limbs nor invisible with no limbs. They lie in between amorphous and morphic state, called, morphoamorphic state, which in Indian context are denoted by the epithets. व्यक्ता व्यक्तं / सगुण निर्गुण in Sanskrit texts, அருவுருவம் aru uruvam in Tamil. In Vaastu texts, the epithet सकल निष्कल[1] is frequently used. They are all synonyms, in technical sense. It may be noticed that the Tamil epithet and its Vaastu versions are unambiguous.

Out of the 81 smaller squares, the central nine are called Brahma Pada or the seat of the creative energy called Brahman or மூலஸ்தானம் Moolasthanam in Tamil. This is actually the பெருங்கோயில் Perunkoil or உள்ளம் ullam of Thirumantiram of Thirumoolar. The word ullam உள்ளம் is very significant in the sense, that it has the quality of going into vibration or pulsation. The word Brahma is also taken to mean 'forceful energy', a word derived from ब्रम, ब्रमर causing cycles like a வண்டு Vandu (fly).

Around this central core (vide fig.1) are located various other luminaries such as Vivasvan, Mitra, Pritvidhara and Aryama in the spaces blackened and in the corner zones 'Indra and Jaya', 'Rudra and Yakshma', 'Apavatsa and Apa' and 'Savita and Savitra.' They are stationed to represent the qualities of Saguna Brahma, while the central energy is Nirguna Brahma. This is the centre to which all gunas converge into a point, which is the centrally situated square, or a cube called otherwise Ekapada. The Ekapada is luminous and golden in colour. This is otherwise called Bindu or Om. The micro cubical particle of energy or bindu

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[1] सकल - अवयवन्वितं associated with limbs. निष्कल - अवयवरहितं with no limbs. सकल निष्कल - मिश्र neither limbs nor without limbs. (morpho amorphic state of existence).

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DIAGRAM SHOWING THE POSITIVE AND NEGATIVE FORCES OF ENERGIES IN THE VAASTU PURUSHA MANDALA

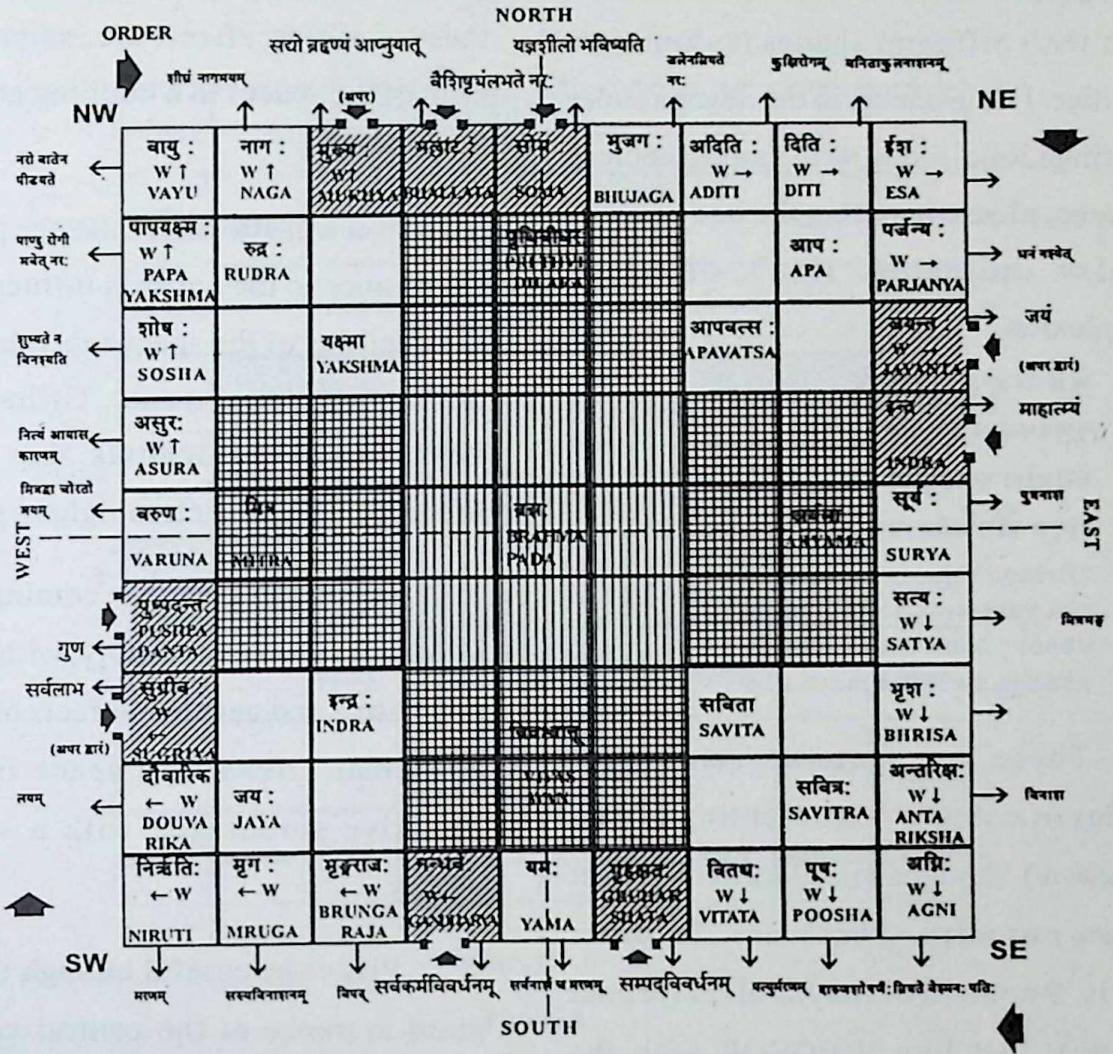

Figure 2

is the structure of Om, be it light or sound. When this structure gets exploded by the inner being's effort to express something experienced, sound or light is produced inside, i.e. in the inner space. This is explosion or big bang as you may call it. This we call 'enlightenment'. This is inner light - inner sound or inner vision. Immediately after this event, the particle of energy goes back to its original cubical form. The restoration of the original structural form is 'implosion.'

The outer most belt accommodating luminous forms is of immediate concern for Vaastu students. Each side has a group of 9 devatas with peculiar qualities and form. Totally, they are 32 in number. In

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the Manasara Vaastu Shastra, we have iconographical representations in human form with different shades (colours) or qualities. For instance, in the dhyana sloka of Bringa Raja, along with iconographical features, please note that the body colour is also indicated. He is of white complexion.

भृङ्ग राजन्तु शुक्लाभं
एकवक्त्रं चतुर्भुजम्।
धनुर्बाण समायुक्तं
खड्ग खेटकमेव च।

"Bringa rājantu suklābham
eka vaktram chaturbhujam
dhanur bāna samā yuktam
khadga swetaka meva cha"

These are Vannams (வண்ணம்), shades of colours - representing ennam (எண்ணம்) 'thought' visual form of gunam (குணம்) quality. These are, in other words, 9 colours of the Moolam (primal energy), just like VIBGYOR with the addition of infra red and ultra violet (Agni and Esana) hues respectively. The colour of Agni is infra red. This Agni corner, is therefore, recommended for Kitchen where the traditional housewife spends most of her time. She is indeed exposed to the healthy rays of infra red. This kind of exposure to various colours are discernible in other minor and major spaces. This calls for further study and interpretations by scientists engaged in colour therapy. Based specifically on these qualities, effects are indicated for each of the spaces in a building enclosed by four walls.

You will also notice that the position of entrance to the house is influenced by the qualities of the space represented by devatas such as Jayanta, Grihakshata, Pushpadanta and Bhallata, that occupy fourth places from left to right in general.

The diagram (Fig.2) coming on the next page is self explanatory, with respect to positive and negative effects of spaces on human life. Every space is hyper sensitive surcharged with a specific quality.

Please be careful enough to avoid main entrance at the central space of Yama for the house facing South, Varuna for West facing house, Surya for East facing house, the only exemption being the central module of Soma in the North. The effect of each entry is mentioned in the diagram itself but the corresponding English meanings are separately offered.

There is also a general rule, that the main entrance to a house should be on the left side of the central line, the cardinal

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VAASTU PURUSHA MANDALA WITH PADA DEVATAS
(in their respective places)

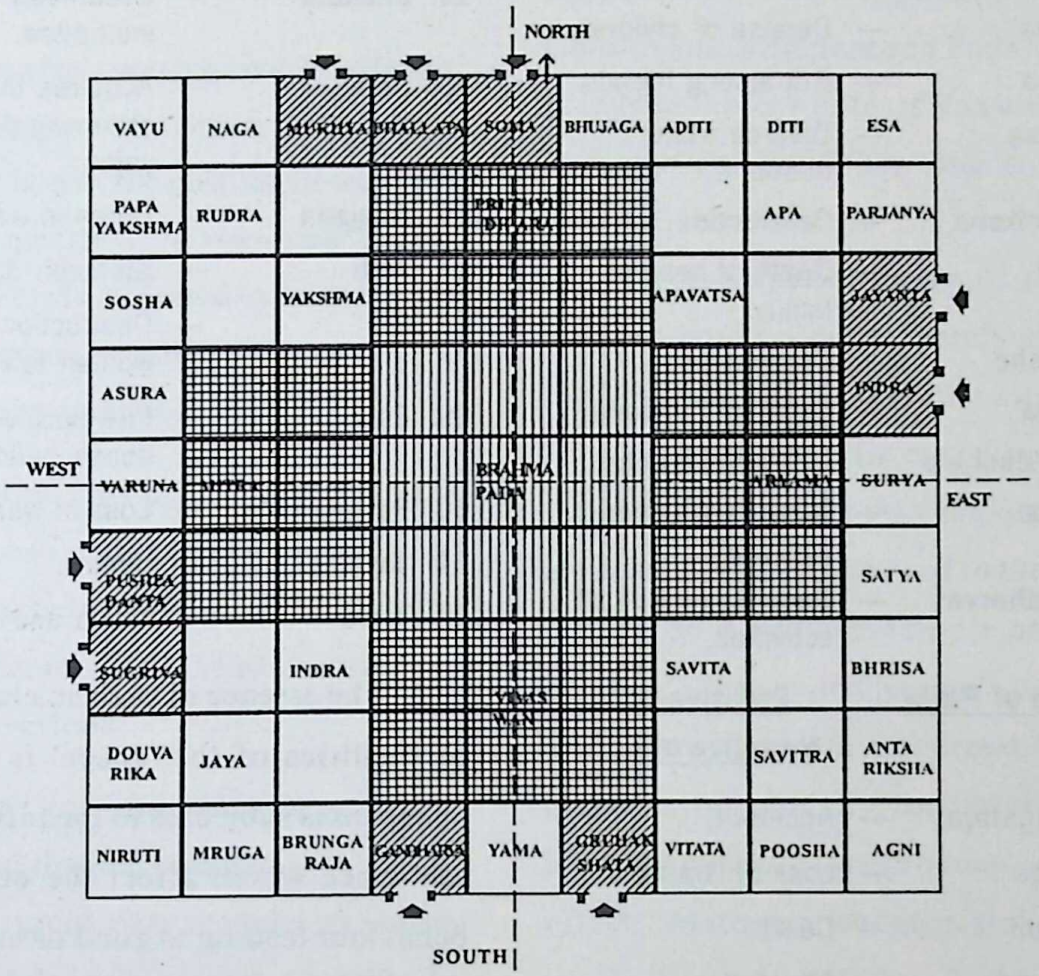

Figure 1

line. This is actually the fourth module in the Paramasayika Mandala. The even Manduka Mandala will have the door next to the central line. In all the cases, the centre of the door frame shall be the centre of the module, no matter if the frame is larger than the modular measure.

Also note that the corner spaces of (3×3) the zones or quarters are equally important since four elements namely water (NE), Agni (SE), Earth (SW) and Vaayu (NW) have their dominant presence while the Space or Akasa is at the central zone of (3×3) acting as Nuclear energy field.

The effects of positioning of Main door (Mahadwara) in a house are detailed hereunder.

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Name of Pada	Positive or Negative effect
1. Surya	— Demise of children.
2. Satya	— Rift among friends.
3. Bhrisa	— Divorce from husband.
4. Antariksha	— Destruction.
5. Agni	— Death of head of family.
6. Poosha	— Depression.
7. Vitata	— Death of husband.
8. Gruhakshata	— Increase of riches.
9. Yama	— Total destruction and death.
10. Gandharva	— Development of all activities.
11. Brungaraja	— Accident.
12. Mruga	— Loss of Grains.
13. Niruthi	— Death.
14. Douvarika	— Absorption.
15. Sugriva	— Abundant profit.
16. Pushpadanta	— Good qualities.
17. Varuna	— Fear from friends and thieves.
18. Asura	— Daily fatigue.
19. Sosha	— Physically emaciated but does not die.
20. Papayakshma	— Skin disease (Lenkemia).
21. Vayu	— Suffer from rheumatism.
22. Naga	— Frequent fear from serpant.
23. Mukhya	— Quick attainment of spiritual goal.
24. Bhallata	— Greatness multiplies.
25. Soma	— Acquires the benefit of having performed yajna.
26. Bhujaga	— Death in water.
27. Aditi	— Stomach disease.
28. Diti	— Destruction of women folk.
29. Esa	— Fire accident to house building.
30. Parjanya	— Loss of wealth.
31. Jayanta	— Victory.
32. Indra	— Name and fame.

The essence of such an elaboration of qualities of the 'space' is that the occupant is subjected to the influence of the space which affect the occupant's behaviour leading to good or bad ends.

For Temples, public buildings and government buildings, main door is recommended to be on the central line - on cardinal points, with a slight deflection (2½ degrees) towards NE when they face East.

In the diagram, sub-doors and alternate position of Main doors are also given. This may be followed when space constraints are met with, but experience shows that the fourth place indicated on

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all sides is productive of immense good to the occupants of the house.

In an ideal courtyard system of house, where light and ventilation are available inside the house, the position of windows are also specified in Manasara Vaastu Shastra. This is indicated by arrow marks in the diagram. For flight of steps NE and SW are recommended.

Before closing the discussion, I would like to point out that formation of a grid in a layout is of paramount importance, which the Vaastu consultants seem to overlook.

If one goes deep into the grid, one would find that the minor spaces within the frame would mean modular measures. Every module is a time-unit, a number. In other words, measured spaces alone would give desired results. This fact is ignored by contemporary Vaastu Consultants. Adherence to Pada Vinyasa is indeed the key note of Vaastu design and application. When one says that kitchen should be in SE, one should indicate the spatial measure that the kitchen should occupy. Merely advising the house holder to keep the kitchen in SE is no good. Specific measures for all functional spaces are very important. No arbitrary measure is allowed in the Vaastu design, be it a house, temple or public building[1]. Even verandhas and porticos as also extensions are governed by this modular measures. Non modular or arbitrary measures are productive of bad effects. Mathematical precision is very much stressed in Vaastu designs as in musical tradition.

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1 In this book of Vaastu Shastra, one, who has perused the topics atleast once, would find that Brahmam is identified scientifically as a macro living being, though invisible to physical eyes. Again this macro being, the Brahmam is a "macro cube" called otherwise. "Brahmanda" which means "a tri dimensional macro egg". A minute part of it called micro being is that minutest particle of energy or space which exists and operates from the centre of the heart. This is called Anu, which being a cube is known as Sitravai சித்தனை, 'micro abode'. अणोरणीयान् महतो महीयान् '*anoranēyān mahato mahēyān*' Brahmam is of anu as well as andam size. So subtle a matter, that the architect has to handle ! He has to be very careful with the space enclosed in a building. So, arbitrary or measure of convenience is strictly prohibited. The ill effects are the off shoot of ignorance of the effects of subtle space, however much the gross is paid attention to.

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DISCUSSION ON THE DESIGNING OF HOUSE BUILDINGS

A practical approach to the problem of house - design based on Vaastu concepts - Factors going into the fabrication of a house - Equated to poetical composition - Certain points to be kept in memory by the architect - A typical house design according to tradition - Exemptions and extrapolations to satisfy contemporary life style, maintaining at the same time the Vaastu principles to the extent possible - Unique view that a traditional house is a paradise on earth, free from earthly tensions, ailments and accidents explained.

After the site is selected for a building, as prescribed in the Vaastu texts, the primary step that an architect has to take is to determine the cardinal directions with reference to the magnetic compass. These lines called North-South and East-West have to be drawn on the design itself and the designer has to set right the building layout, parallel to these lines, giving setbacks as per prevailing local rules. If possible, the reading of the Sun's shadows and determination of cardinal lines may be attempted, which alone would be precise and faultless. If this is not possible, a magnetic compass may be used and a correction may be carried out. This correction is of 2½ degrees as per practice in the tradition. In other words, the East-West line should be shifted by 2½ degrees in the direction of South-East point. These corrections will give us what is called TRUE EAST. Perpendicular to this, will be true North-South. The proposed building can face any one of the four directions. This is orientation, otherwise called 'aspect' of the building. In Tamil it is called பார்வை Paarvai (sight) or நோக்கு Nokku (look). This is signified by the term 'aspect'.

As regards orientation of a house, there is a prescription or an injunction in the text of Manasara and other Vaastu Shastras, that the **true East-West line is to be adopted for those inhabitants who seek liberation from earthly bonds and wish to enjoy**

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peace of mind[1]. For those who prefer material prosperity and physical welfare, a displacement or a slight movement of the East-West line towards North-East point, by a particular digital measure, is suggested by Maharishi Manasara[2] (Vide **orientation of buildings**).

'Suddha prachee' is the terminology for the true east and **'Esa prachee'** for the deflected line of orientation towards North-East point. It is to be borne in mind that Esa prachee is not the line facing Esana corner. No building should face diagonal directions such as North-East, North-West, South-West and South-East. They are called VIDIKS. In the context of Esa prachee, the shastra is very precise in saying that the deflection towards north-east is only minimal and in terms of angula measure[3], it is only one. This angula is a matra - a digit - obtained from the height of the gnomon i.e 1/24 of the height of the gnomon (Shanku).

The traditional architects do take into consideration these two aspects whether they design house buildings or temple buildings. Further, this orientation is of paramount importance in the design of residentials as well as public buildings. The benefits that the houses are able to bring to the inhabitants are solely dependent upon this 'aspect' of a building. If this goes wrong, everthing will go topsy-turvy. No remedial measure will cure the sickness of the building. What is further important in this context is that the orientation should start at Town planning stage. So the Town planner should be very careful in orienting the town or village with due respect to the cardinal directions, the failure of which will lead to various types of social evils and disturbances. Since the modern material science is not aware of the

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1 मुक्ति कामस्य करणे शुद्ध प्राचीं प्रयोजयेत्
mukti kāmasya karne suddha pracheem prayojayet.

2 ऐशान्य प्राची सर्वस्य भोगकामस्य सम्मताम्
Isanya prachee sarvasya bhoga kamasya sammatam.

3 प्राच्याङ्गुल कृताद्बिन्दोरुत्तरे चाङ्गुलं न्यसेत् - Prachyangula kritatbindoruttare changulam nyaset.
This point is not understood by certain practitioners, with the result that they take it verbatim and erect the house facing exactly North East corner which would seriously affect the inmates of the house. Since the Vaastu Purusha himself lies facing North East direction it has been assumed on a religious ground that it is sacred and good. But what is said by Manasara is scientific and hence, North East orientation will bring bad effect. Similarly, Manasara is very particular about South East orientation and recommends outright rejection. आग्नेय प्राची सम्युक्तं सर्वदोषकरं भवेत्. *āgneya prachee samyuktam sarva doshakaram bhavet.*

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effects of the cardinal lines on human life, no serious attention is paid to this aspect of orientation. Vaastu Shastras hold the views that, it is invisible that rules over all the visibles. Have you seen your life energy? No. Does not this activise and make you functional in many a respect? Are you able to see the energy contained in the magnet? You see its dynamics when the pin or needle comes within its field. So, it is a mahavakya of Vaastu that the invisible energy controls the affairs of the visibles. Let us see how directional forces are unseen but cause effect on human life. Embodied energies including human beings are needless and bodiless free energy is just like magnetic energy. In the shastras, there is a significant sloka which indicates specific benefits that this constituent of a building design would bring on to the inhabitants of the city or inmates of the house.

प्राक् दूरे सुखदं विद्धि पश्चिमं पुष्टिवर्धनम्।
धनदंच उत्तरद्वारं द्वारं याम्यंच मोक्षदम्॥

The meaning of this sloka is that those who wish to enjoy 'sukha' or comfort should have their cities, towns, villages and houses facing East. This means that the entry to the aforesaid layout will be from the East to the West (vide drawing under orientation of buildings also). Such of those who are willing to enjoy material growth and prosperity, should have their layout facing West. Those who wish for wealth should have their layout turned towards North and those who prefer salvation from earthly bonds and tensions, should have their abodes turned towards the South. This is a general theory with respect to orientation. This is applicable to all buildings including temples and other public spaces.

Therefore, the Sudha prachee and Esa prachee will be taken into consideration with respect to the residential buildings in preference to the expectation of inmates that is East, West, North and South as the case may be. The application of Esa prachee is universally preferred by all human beings, in view of the fact that all wish for happy and contented material life on the Earth. Hence the Townplanner, at his level, should orient his towns or villages with due reference to Esa prachee, so as to allow the society enjoy happy and contented life. This is

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planner's duty and primary contribution to the welfare of the society.

The next aspect of the house design is to decide upon the length and breadth of the proposed house. In this context, the traditional practice and shastraic direction is that the perimeter of the proposed building should be auspicious and also well related to the temparament of the inmates of the house. In an Indian family, the mistress of the house holds a very significant and dignified status. She is considered, not only as an attractive element of the house hold, but is regarded as the ruler of the entire house hold, since the husband goes out into the outside world seeking wealth for the maintenance of the house hold. As such, the duties and responsibilities of the mistress of the house are too many - such as up keep of the house, cooking food for the family, tendering children, receiving guests, maintaining cows and calves, growing plants and trees on the backyard and above all looking after the children's education and worshipping the family deity. It is she, who maintains a congenial atmosphere in the house hold. It is she, who removes tension and fatigue from the master of the house, who would have met with such situations during his occupational career or rounds outside. So the shastraic outlook and traditional practice is **to create another organic form called house to co-exist with and add to the spiritual wellbeing of the mistress of the house.** That is to create an ambience within the built space, which would vibrate in harmony with the vibration of the house wife. Isn't this not the science of the Vaastu sacred? Yes, in this respect the traditional Science of India stands unparalleled and supreme. This is the subtle aspect of built space.

The traditional architect in this context, rightly calls for the birth star of the mistress of the house and applies a mathematical formula called Ayadi Ganita by which he decides upon the wave length of the mistress. If necessary, the wave lengths of the inmates of the house may also be taken into consideration and the common wave length determined. This mathematical process of considering the birth star is based on the fact that every individual whether he wills it or not - whether he believes it or not, is born under a star and lives under its

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influence which persists throughout one's life-time. The constant interaction between the vibration of the star and that of the mistress or members of the house hold, shape their inborn qualities, mould them into men of good character and conduct, in such a way, that all of them grow spiritually and exhibit good behaviour and move in the direction of prosperity and peace. This is indeed the end-product of Vaastu Science. Is this not mathematics? Is this not the science of the highest order?

Now the measure (the wave length) is readily available by which either a square layout or a rectangular layout is decided by the architect depending upon the shape of the land to build on.

Other patterns such as octogonal, polygonal and circular can also be calculated on this basis but they are not meant for residential purposes. At the same time, certain patterns are adopted for temple layouts as sanctioned in Vaastu Shastras. They are meaningful patterns applicable to spiritual concepts and religious doctrines. Further such and other patterns can be seen in the design of domes and on other accessories of a temple scheme. In fact, all patterns, curves, linear and angular forms are exhaustive in sculpture and architecture of Vaastu origin.

The following are the basic patterns of temple layouts and dome designs:

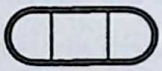
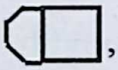
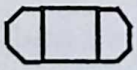
Square,

Rectangular,

Octagonal,

Circular,

Apsidal and

 Dwayasra vrutta. There are certain derivatives also like  ,  .What would be surprising to learn is that, all these patterns are applied in the various house and temple designs by Maayan of Mexico in a particular place called Kushku which is identified by the Sthapati as a distorted name of **Kishku,** a hasta measure dealt within Vaastu Shastras. This is the self same measure of yard stick, used from the early times till date in Tamilnadu. This is the yard stick mentioned by Elango Adigal in Silappatikaram of 2nd century

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A.D. This is 24 manangulas, equal to 33 English inches.

There is another important point that should be borne in mind by the designer. The shastras prescribe certain measures such as Hastas, Vithastis, Talas and Angulas. These measures are not arbitrary ones, but derived from the vibration of the universal space. Since the space existing within the inmates of the house, is a part of the outer space, the use of this measure becomes a measure of paramount importance. It is actually the number[1] (vibrational count) that establishes the harmony between the individual and the house where he lives. The same measure has to be applied in all cases right from the planning stage to the construction of the individual houses for happy entry and occupation. The traditional designers hold this as very sacred and they never fail to apply these principles whether preferred by the indweller or not. The greatness and the sacredness of our temples and certain monumental structures standing still vibrant today, braving all adverse forces of nature, lie in this secretive science.

Now comes another important aspect of the design process. The layout prepared as indicated above, will either be a square or a rectangle. The square layout is held very sacred and significant, as it conforms to the layout of the universal space! We have mentioned at many a context that the unmanifest, manifests itself in a geometrical form and it is a square two dimensionally and a cube tri-dimensionally. **"God geometrizes all objects of the universe" is the concept obtained today from the West! This is the concept of Vaastu designs of the Vaastu shilpa shastras that are identified to be ten thousand years old.** The Vaastu Purusha Mandala as discussed elsewhere expresses the basic manifest form. The rectangular pattern of layout is nothing but the extension of the square in a particular order or proportion, not arbitrarily created. Order is beauty. And this order exists in the universe. This order is eternal (sanatana).

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[1] Do you know that numbers create harmony? For instance the number 4 goes into harmony with 8,12,16,20 etc. that are multiples of four. Similarly, every number remains harmonious with its multiples. The energy capable of vibrating by itself becomes quantifiable and quantified, by the traditional science from which a measuring rod called HASTA is evolved and put to use actually for the last several hundreds of years. The actual measure of one hasta is 33 English inches as stated above.

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Taking the square as the basic pattern, we have to decide upon the longer side, that is, the length of the house layout. The general proportion between the shorter side and the longer side is 1:1¼, 1:1½, 1:1¾ or 1:2. This is rhythmic. No arbitrary measure is allowed in the tradition with regard to the extension of layout from square to rectangle, with the result, the house gets designed into an orderly form. If there is no order in the built space, that is in the configuration of room-spaces or living spaces inside, there will be chaos leading to frequent sickness in the houses. The indweller is put to lot of strains and stresses caused by invisible forces enclosed in a house or building, in general.

Now, comes the grid pattern to be adopted in the case of square or rectangular layouts of buildings. It is already discussed that there is a grid - pattern developed on the surface of the Earth, that are not visible to our naked eyes. The modern scientific instruments, it is said, have identified these lines occurring on the surface of the Earth. But how the occurrence of such a grid had been identified by the authors of Vaastu science in the remote past is a wonder! Our traditional authors of Vaastu Shastra have plotted imaginary lines on the surface of the Earth, astronomically and mathematically stated as the lines of Aksha Rekha and Deerkha Rekha with due references to time and space. In English we denote them by the terms lattitudes and longitudes. On the surface of the Earth any number of lattitudes and longitudes can be drawn on the surface of the Earth which would mathematically reveal that the Earth is covered over with an orderly grid. You must be knowing that these latitudes and longitudes are with reference to the Sun-rise and the Sun-movement. The spread of the grid on the surface of the Earth is also attributed to the inner awareness or radiance of the fire that exists in the core of the planet Earth.

Now the architect has to create a grid pattern on the design that he prepares for his client. If the grid of the house and the grid existing on the surface of the Earth go into harmony with each other, it may be stated that a spatial congruity or congruence is established leading to a harmonious link with the universal space. In the mathematical language the architect establishes a link between the built space and the earthly space. Don't you feel proud of this science handed down to us

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by a great son of India, the legendary Mayan? Is he not equal to God himself? Is it not correct, when Veda Vyasa addresses Mayan as the Viswakarma of the material world?

Don't you realise that this is the significant and most important principle of orientation?

The enclosed space called building is not empty, but filled with luminous substance which is otherwise called energy. When this space is turned into a grid it becomes part of the grid of the Earth, when laid on it. Another fact of Vaastu science is that there is already a grid permanently existing in the subtle space beyond which nothing exists. This is basically responsible for the sound and light to turn into aural and visual forms of reality. By establishing a congruency between the man-made grid and the earthly grid, I am to say that unconsciously a congruency between the man-made grid and that of the spatial (space) grid also gets established. If this tie-up is fixed and permanent, the occupant can be said to lie in permanent and perfect union with the universal being. So it has become a practice to design the house layout or town layout or any layout that we create in the form of square or rectangular spaces and to call it 'Energy Grid'. Mathematically one can create countless grids that will fit in with the earthly grid but the Vaastu shastras have identified two basic grid patterns, where one is called **Manduka grid** and the other **Paramasayika grid** and you know that the Manduka is the layout consisting of 8 x 8 = 64 squares and Paramasyika 9 x 9 = 81. In other words they represent even number of grids and odd number of grids with a kind of subtle difference in their qualities. There are grids expressing multiples and fractals ranging from 1x1 to 32x32.(They contain even and odd numbers within which the manduka and paramasayika lie. Note also that they are multiples of 8 and 9). Such a restriction is also put on the number of grids. Now these are grids that we have to create on the layout proposed for a building. We have also discussed that the grid of 81 units is applicable for those who aspire for physical comforts and material prosperity. This is the grid that is universally applied for all human abodes from hut to mansion, unless otherwise required for specific purposes.

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After a grid is developed on the square or rectangular space decided for the house, the architect is to locate the door opening of the building on the design. This is also an equally important and significant aspect of building design. In general terms, irrespective of the aspect of the building, that is, whether it faces South, East, West or North, the main door should be located on the 4th module from the extreme left (Vide typical layouts). This is the location with respect to the Paramasayika layout. If the layout is on 8 x 8 units of the manduka layout, the main door has to be located on the left side module of the cardinal lines. But in the shastra, certain additional positions are also indicated, which the reader has to take it from the diagrams of Paramasayika layout appearing elsewhere in this text. By looking at the unitary grids developed on the perimeter of the house layout, we would find the positive and negative influences on the indweller.

In this context one would feel asking why that the universal space and space enclosed (called Saguna Brahman) develop different qualities in the individual units? The answer is that it is only the Unmanifest, the Nirguna Brahman that is free from generating positive or negative effects but the Manifest is supposed or realised to cause all good and bad effects on the life of the animate objects of the universe. So the location of main door in a house layout assumes deep significance.

Deciding thus the place of the main door, the next concern is to locate the Back Door in the layout which is laid on the module directly opposite to the main door. It is said in the shastras that there should be a passage running between and connecting the back door and the main door. This passage is said to be the Vamsadanda or backbone of the living organic material form called house. In all the old houses one would have noticed this aspect, well maintained. The material benefit, in this case, is that there will be cross ventilation in the house in view of the straight passage. The scientific (spiritual) significance is that the solar energy enters the house and makes its exit by the back door thereby causing perennial supply of energy waves from the Sun into the house as well as space surrounding the house. This particular passage of energy is called yoni (योनिः) which is defined as the prana of the

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building. योनिः प्राणां धाम्नः. It is an energy tunnel through which the life energy is let into the house. This is hence very vital in the design of house layouts.

There is another significant factor that should be understood by the designer. The grid of 81 units will have a central courtyard of 3 × 3 = 9 units which is called **Brahmasthan,** which can be interpreted as the nuclear energy field. This part of the house is said to be the **lung of the house**. So there is a caution that this part should always be left free and unbuilt and not to be tampered with either by a pillar or a wall. At this particular field, called courtyard, in the traditional houses, it is left open to sky, by the provision of which, the energetic space surrounding the Earth and existing above, is attracted into the house, so that the inmates living in the house would benefit by the spiritual energy throughout their life time. For security reasons, a grill is usually provided at beam level or covered with a flat roof with raised ventilators, so that the benefit is not fully lost.

The animals and birds roaming in the forest are very healthy, compared to intelligent human beings who live in mansions. This is because, they are living in free space and in direct communion with the free space. The trouble came only when the human beings got themselves isolated from free space and got themselves shut up within the four walls. The space is available at free cost. Now we have to buy the comfort at heavy cost. Is man so intelligent today? The medical units are multiplying every day throughout the modern world. Why? We have ignored nature and its salubrious subtle effect on human life. Do not forget that the Vedic knowledge has come from those who lived mostly in free space. Mayan the great scientist of ancient India lived mostly in forest area (to carve out towns and cities) and he was therefore called காணுறை மயன் Kanurai Mayan (Mayan who always lives in the forest) in the Bharatam of Villi puthur Azhvar of Tamilnadu. Most of the scientists never stayed in the laboratory but kept themselves away and out into the garden to focus their attention on the particular subject of their search or research. But what is significant in the Vaastu buildings is that the design is so

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based on the science of Time and Space, that the resultant product will be little universes under which the members of the family will enjoy the orderliness of the free space and grow physically, wisely and spiritually. Since the achievement of all these benefits are science based, they are indeed tangible also.

The next step in the process of building design is the configuration of living spaces within the enclosed space. The particular space selected for such a configuration is called basic structure or mother-house தாய்மனை in Tamil. The corresponding Sanskrit word is गेह-गृह geha/griha. There is another common word for all types of buildings. That is प्रासाद praasaada, which is defined as a space where men and gods, delight to live for a long time.

देवादीनां नराणांच येषु रम्यतयाचिरं ।
मनांसिच प्रसीदन्ति प्रासादास्तेन कीर्तिताः ॥
"Devaadeenaam naraanaam cha yeshu ramyatayaachiram
Manaamsicha praseedanti praasaadaastena keertitaha"

In Rik Veda, there is a sloka by which Vaastoshpati (Vaastu purusha or Vishwakarma) is invoked and prayed to, for certain specific benefits to be conferred on the entrants to the newly built house, implying thereby that the house is capable of offering such benefits. The spirit of the house is worshipped here in this context. The prayer is called 'Vaastoshpati Sukta' (Rik 7-54)

वास्तोष्पते प्रतिजानीह्यस्मान्
त्स्वावेशो अनमीवो भवानः
यत् त्वे महे प्रतितन्नो जुषस्व
शं नो भव द्विपदे शं चतुष्पदे
वास्तोष्पते प्रतरणेन एधि
गयस्फानो गोभि रश्वेभि रिन्दो
अजरासस्ते सरव्ये श्याम
पितेव पुत्रान् प्रतिनोजुषस्व
वास्तोष्पते शग्मया सं सदाते
सक्षीमही रण्वया गातुमत्या
पाहि क्षेम उत योगे वरं नो
य्यं पात स्वस्तिभिः सदानः
अमीवहा वास्तोष्पते विश्वा
विश्रवारूपाण्याविशन्
सरवा सु शेव एधिनः

"PROTECTOR of the dwelling recognise us: be to us an excellent abode, the non inflicter of disease: whatever we ask of thee, be pleased to grant, be the bestower of happiness on our bipeds and quadrupeds.

Protector of the dwelling, be our

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preserver and the augmentor of our wealth; possessed of cattle and horses INDRA[1], may we, through thy friendship, be exempt decay, be favourable to us like a father to his sons.

Protector of the dwelling, may we be possessed of a comfortable delightful, opulent abode bestowed by thee: protect our wealth, whether in possession or expectation: and do you (Gods) ever cherish us with blessings."

A residential building of a normal size and of traditional order will have the following facilities:

1. Master Bed
2. Kitchen
3. Space for dining
4. Drawing and study
5. Room for grains (store)
6. Room for utensils and instruments
7. Pooja room
8. Space for guests
9. Space for wash and above all a central courtyard for cultural events such as marriage, music, dance and other events of religious character, say yajna.

Other facilities such as stair case, bath room etc. may be within the basic structure, but better if they are outside, in the veranda part of the building, which part will be spatially extended to be in consonance with the modulated units of space attributed to inside of the building. This averts disharmony in the built form, so extended.

Another basic facility that is indispensable is the **'well'** for water supply, which should be outside the building and in a particular zone namely North East. Where problems of location crops up, the next alternative is to locate the well between North and North East and between North East and East. This part of the building is called water zone.

Under modern life style and requirements, the society expects facilities such as sit-outs, toilets, lofts and a mini assembly hall for the house-hold. These can be provided in the verandha coming around the basic structure. Sometimes mezzanine floors are also to be provided. This can be

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1 Sthapati's identification of INDRA as Vishwakarma as well as Mayan gets justified here.

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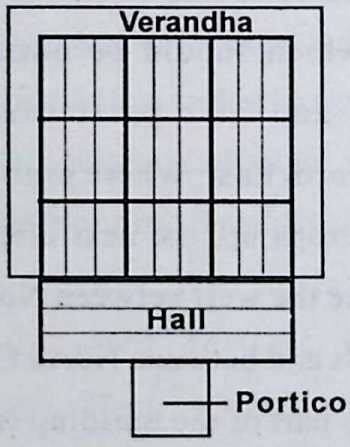
introduced with due respect to vertical modulation. In a larger house there will be spaces for all facilities.

While designing either a square or rectangular one, where additional facility is needed, a hall may be added on to the front side with modulated measure. This may be 1 to 3 modules. Just in front of this, a portico projecting 1 or 2 modules with width in terms of modular measure. This may be provided with pillars also.



What is to be remembered in this context is, that there is no necessity to do aayadi calculations for the hall and portico since the modulated measure is already subject to aayadi purification. This is illustrated in the above diagram.

Further, this building may have verandha also on 3 sides or on 2 sides as per requirement. One thing to be kept in mind is, wherever additions are made, they should be the extension of the modulated measures employed for inside spacing. Remember this is what the modern consultants become oblivious and are not aware of. All troubles that occur after addition to an already build structutre is simply on account of the use of arbitrary measures in utter disregard to the concept of modules, permeating the built space.

The remedy in such cases is to modulate the old house and carry out the extensions by modular spaces. This will alleviate many a ill or danger invariably met with by clients. It would be better if the inside walls and spaces of an old building are set right and modular extension proposed. Another factor to be considered in this context is that there should be a compound wall wherever possible, and parallel to the building line or the orientation of the main building. Orientation is the most vital element in a building design. While faced with irregular plot, the compound wall has to be raised as shown in the diagram.

Let the house layout be modulated and laid near the plot. Extend the modulated lines all over the plot, then

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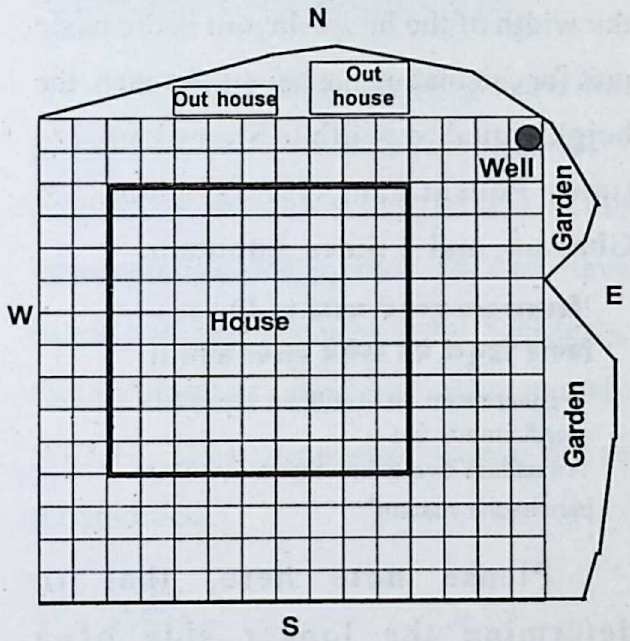
mark out the compound wall. The triangular pieces can be used for gardening, out house, servant quarters etc. Compound wall should be, as discussed, parallel to the building walls and the remaining part, being part of one's



property, may have a barbed wire fencing or live fence.

All those facilities will apply, as earlier mentioned, to a normal house building warranting a measure of, say, 40' x 40' approximately, and depending upon the measure and shape of the building - plot available. If inadequate in any sense, the house holder has to have a storied building, limiting the space to the extent required.

There is a casual talk on platform by certain influential members of our society that the traditional house - patterns are fit for only mansions, not knowing that there are variety of patterns ranging from hut to mansion with due respect to Vaastu principles. Those who have visited the village settlements would bear witness to this statement of mine. The types that I am keeping in mind are 'dandaka' the ▬ rectangular pattern, ▙ type called 'swastika' and two ▙ types put opposite to each other and united called Maulika ▛. These are meant for low and middle income groups and also for factories.

Next comes the determination of the heights of buildings according to Vaastu tradition. The easiest and the basic approach to this problem of height is to make use of the modular measure, calculated for a house building, as a unit. If the layout is made up of squares, one side of the square will be the unit by which the vertical measure is to be decided upon. The practical approach is to assume the height preferred first and convert this or adjust this approximate measure into full modules, not fractions. For instance if the module is 3'.6" and the height

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preferred is around 10'.0", it will be clear that 3 full modules have to be taken as the measure, which is 3 × 3'.6" = 10'.6". This may be the height from the basement top (floor) to the roof top, provided the roof is flat. This height may be from floor to ceiling, or to the middle of the slab (or Madras terrace) or including the thickness of the slab. The main objective, to be kept in mind, is to have the inside of the house filled with unbroken modulated spaces. The volume of the house-inside, should be packed with cubical spaces, to the maximum extent possible without mutilation. Remember that every cube is a cube of energy and a cube of sound as well, the mutilation of which will cause '*apaswara*' or wrong note in the composition of the structure, leading to physical ailments. This formula may be applied to all upper floors.

If the layout of the floor is made up of rectangular modules we have to take the shorter side (width) of the module for fixing the height.

There is also a set of formulae for determining the height of a traditional building which covers base, wall, roof or dome or pitched roof and finial. (In some cases finial height is ignored.) The formulae are five in number, denoted by the effect of the resulting visual form. They are **Shantikam, Poushtikam, Jayadam, Ghanam** and **Adbutam**. In this context, the width of the house-layout is the basic unit for calculating the height. As such, the height equal to width is Shantikam, 1¼ times Poushtikam, 1½ Jayadam, 1¾ Ghanam, and 2 times Adbutam.

[1]विस्तार सम मुत्सेधं सपादं सार्धमेव वा ।
त्रिपादं द्विगुणं चैव उत्सेधं पञ्चधा मतम् ।।

"Vistaara sama mutsedham sapaadam saardhameva vaa
Tripaadam dvigunam chyva utsedham panchadha matam"

Please note here, that to determine the longer side of a rectangular layout and that of height, the formula is one and the same. Note also the relation between **width and height** in Vaastu context.

To understand these proportions and apply them effectively, one should have adequate experience in the design of layout plans or should have undergone training in the studio of a traditional practitioner. It needs extensive

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[1] Mayamatam - Chapter 26, Slokas 9 and 10

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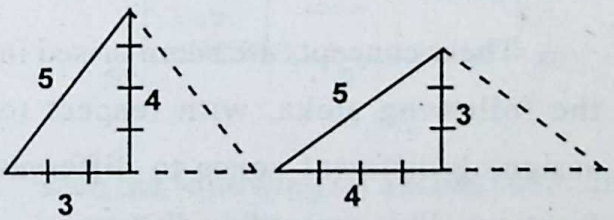
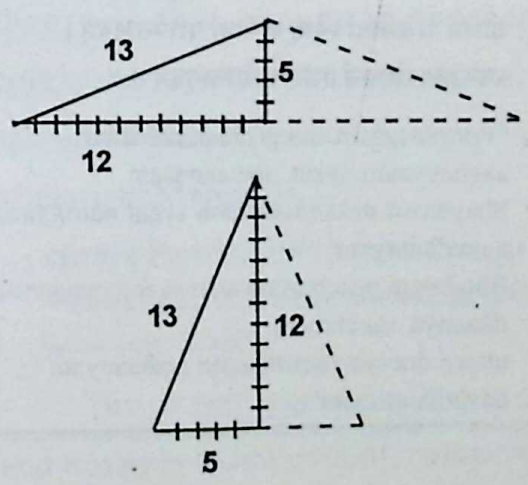
and intensive training. No theoretical knowledge will help the designer. **What is very important to note is that arbitrary measure should be avoided at all costs** so that the spiritual or spatial significance is not tampered with.

For pitched or sloping roof, the formula is a right angled triangle in 3:4:5 proportion, where the longest side is the hypotenuse or sloping roof. Then we have to add the eaves conveniently. Similarly, there is another set of proportion namely 5:12:13. These proportions are as old as the tradition.



These proportions are noticeable in Mexican Maayan buildings also.



The determination of the heights of storied buildings, with due reference to cost and elegance needs good experience, not so easy as imagined by certain individuals. **The Indian visual aesthetics is equally terse to be practised and adopted or adapted, without previous exercise. It is just like the 'sadhaka' - repetetive practice - required for acquiring mastery over Karnatic music.**

Now let us turn to the physical functions of the built space with due respect to their locations. First comes the **position of well**. This has to be located invariably in the North East as recommended by the generality of the authors of Vaastu shastras, if not, certain bad effects will have to be faced by the indweller.

East	-	loss of children
South East	-	fire hazard
South	-	fear of enemies
South West	-	quarrel among women or created by women folk.
West	-	frailty of women
North West	-	poverty
North	-	**increase of wealth**
North East	-	**blessed with children and prosperity.**

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These are all qualities of Earth-energy which gushes forth, if bored, for water.

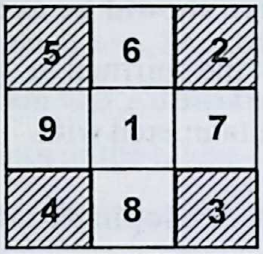
[1]प्राच्यादिस्थे सलिले सुतहानिः शिखिभयं रिपुभयंच।
स्त्रीदौष्ट्यं नैस्व्यं वित्तात्मज विवृद्धिः ॥

"Prachyadisthe salile sutahaanihi
shikhibhayam ripubhayam cha
sthreedowshtyam naisvyam vitaatmaja
vivruddhihi"

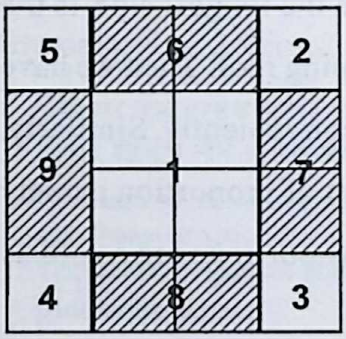
As regards the location of Kitchen, Bed, etc. the following are the directions, that may be followed. This is based on the quality of corner zones of the built space, namely Esana (North East quarter) -the source of power, Agni (South East) the element of heat to activize energy, Nirruti (South West) indicating heaviness, calmness, coolness for bed chamber and Vaayu (North West) signifies movement. Further there are interactions between the forces existing in the opposite corner zones, denoted by the term சுப co-friendliness - one helping the other - leads to positive effect, such as between fire (Agni) and air (Vaayu) and between earth (Nirruti) and water (Esana) all equally spaced in a layout.

Please note the difference between directional lines and zones as indicated in the neighbouring diagram. Also note that all these are attributable to only enclosed spaces-that is building.

Paramasayika



Manduka



Zones

1. Brahma
2. Esana
3. Agni
4. Niruti
5. Vayu
6. Kubera
7. Indra
8. Yama
9. Varuna

These concepts are summarised in the following sloka, with respect to assigning different zones to different functions.(Vide succeeding diagram).

[2] पूर्वायां श्रीगृहं प्रोक्तं आग्नेय्यां स्यात् महानसम्।
शयनं दक्षिणायां स्यात् नैऋत्यां आयुधालयम् ॥
भोजनं पश्चिमायां स्यात् वायव्यां धान्यसञ्चयम्।
उत्तरे द्रव्य संस्थानं ऐशान्यां देवतागृहम् ॥

"Poorvaayaam sreegruham proktam
aagneyyaam syaat mahaanasam
Shayanam dakshinaayaam syaat nairutyaam
aayudhalayam
Bhojanam paschimaayaam syaat vaayavyaam
dhaanya sanchayam
uttare dravya samsthanam aishaanyam
devataa gruham".

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1 Brihat Samhita.

2 Suprabedagama.

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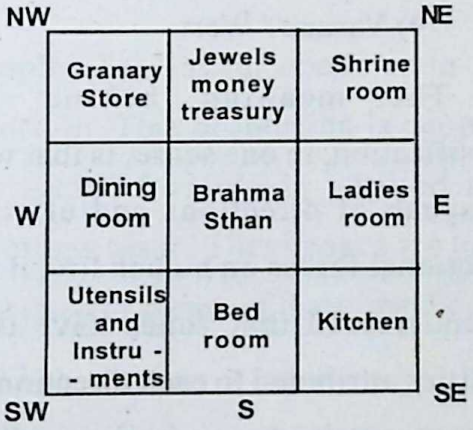
Now that the life style is changed, the actual practice of storing grains and utensils are carried over to kitchen where loft and cupboard are provided. Ofcourse the space is also saved. This is being followed today and found to work well also. The master bed is also changed over to South West instead of South, which is supported by certain other authorities. As



such the following layout has come into force.

As quoted before, the general theory is that excepting the central courtyard which is Brahmasthanam, all spaces are usable for living purposes says Maharishi Manasara -

ब्रह्मस्थानं विनान्येषां सर्वेषां वास योग्यकम् ।।

"Bramhasthanam vinaanyeshaam sarveshaam vaasa yogyakam"

The present day way of life in cities and towns is to have toilet, sump, septic

Guest Bed room	Jewels money treasury	Shrine room Reception & study
Children Dining	Brahma Sthan	Ladies room
Master bed room	Dining room	Kitchen & store

tank within the compound. Though bathroom "स्नानगृहं" is accepted by the Vaastu shastras to be located on the East or North side of the building, toilet of today's character is not mentioned in the Shastras - just to avoid pollution. Taking into consideration this aspect of cleanliness, and going in conformity with the Vaastu principles, toilet can be put at Northern or Eastern zone not at North East zone or South West zone, both of them being sacred. This is applicable to septic tank also. The North East zone is also recommended for storage of water, that is for sump (जलकुण्ठ) overhead tank (जलकोश). Other places are not recommended. It is better they are annexed to the main building under Verandha.

For stair cases, the verandhas are preferred, if not the spaces in between the corner zones are recommended with the steps arranged in clockwise direction. On

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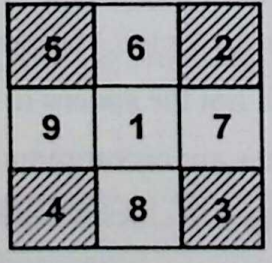
no account, the stair case should be in the Brahmasthan or to be anticlockwise.

For interior decoration, wood is preferred from the early times. Even chairs and stools, bedstead and tables are to be designed on modular measure. This comes under शयन वास्तु Sayana Vaastu. Stones are not recommended for flooring in the residential buildings, though used in temples.

Before closing this chapter, I would like to draw the attention of the readers to one important theory that in all the objects of nature, the gross elements such as space, air, fire, water and earth are present collectively. In other words, every object of nature is the composite entity of five elements existing in an enclosed body of **matter and energy,** atomic in shape, which is called microbode - cubical in form. They occupy the microbode in an order, in five zones. They are illustrated in the adjacent diagram.



The following are the zones with their names:

1) Space விண்வெளி,
2) Water நீர்,
3) Fire தீ,
4) Earth நிலம், மண்,
5) Air வளி, காற்று,
6) Kubera / North,
7) Surya / Indra East,
8) Yama / South,
9) Varuna / West.

The meaning behind this classification, in one sense, is that when we speak of directions and effect of directional forces on human life, it is to be understood that zones have those qualities attributed to each direction and they are contained as such when walls are raised over zonal limits. Based on this concept, experiences and effects are indicated by the shastras and not merely East, South East, South, South West, West, North West, North and North East lines. This must be kept in mind when designing various living spaces. Please note that these spaces are uniform in area when square and when rectangular, they will be in proportion to the basic rectangular plan, with equal spatial measures. **Please remember that in the material world, it is the invisible that**

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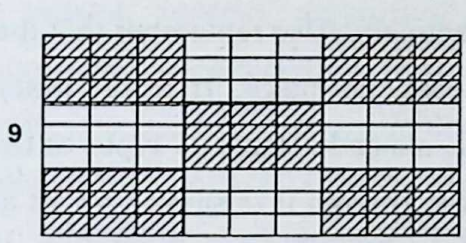
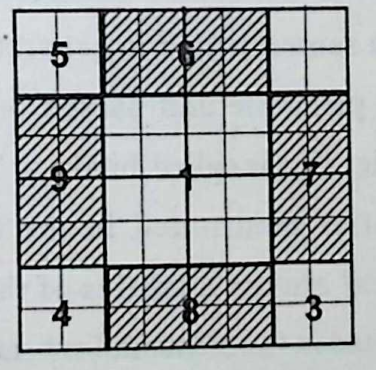
rules over the visible. That invisible is called Time, Kaala, the rhythm, the speed of energy.



Gross grid 81

Example: The layout above is in 1:2 proportion. This proportion is adopted after Ayadi formula is applied and corrections made. These zones are to be demarcated by means of lines as indicated above.

When these zones are so divided, you will find the emergence of Paramasayika Pada Vinyasa. Similarly we can create Manduka Pada Vinyasa as demarcated below.



A comparative study of these two mandalas will throw ample light on the fact that in the Paramasayika (gross) the zones are equally divided and rectangular, whereas those in the Manduka (subtle), the corner zones are squarish while the intermediaries are multiples of square zones.

There is another theory that the rectangular plan can also have square spaces (instead of rectangular space) inside the built area provided the modulated spaces are not mutilated or fractional. In this case, it means that the squarish modules of the square plan (manduka) are merely extended to create rectangular plan (paramasayika). If mutilated, it is called **'Padacheta'** (பதச் சேதம்) said to distort good effects. This is Maya's theory, followed in practice, but not longer sides shall be 12½, 5½, 5¼, 12¼, etc. The divisions shall be round numbers. For pavilions (mandapas) and columned buildings, odd numbers of spans on both sides are strongly recommended and strictly followed or else, there will be a column in the centre of the building which is objectionable. ஒற்றித்த பத்தி (space) இரட்டித்த கால்கள் (column) ***'odd spaces and even columns'*** is the dictum.

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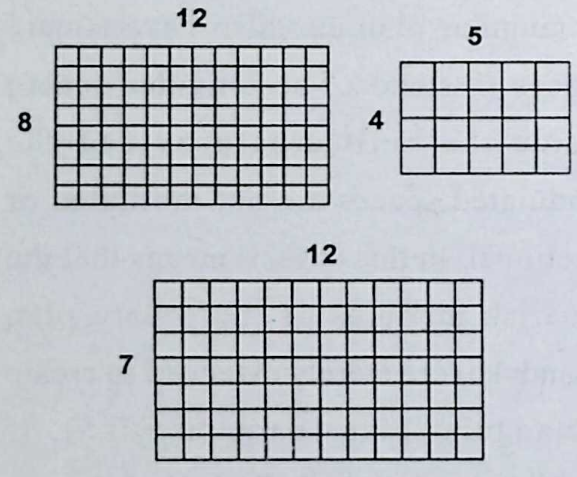
This principle is noticeable in Roman and Greek architecture. Though looking simple, while designing, there will be problems and if solved, the resultant structure will be visually pleasing. The positions of columns are therefore dealt with separately, with illustrations. These are arche typals. Flat promoters will find this very convenient.



Please note also that there are 32 energy grids starting from the Primal luminous grid of 1 x 1 and ending in 32 x 32.

Since the grid is applied from small hut to mansion and on to village, town and city layouts they are to be logically and mathematically expanded or contracted as the case may be.

Also note that they start with Eka taala and end with 32 taala, in peculiar accordance with musical tradition. Not only taala but also raaga. They are basics and practicals. Also remember that there are - Eka, roopaka, triputa, matya, jhampa, ata and dhruva - 7 types of taala measure, though it is said to be 32 and beyond. That Aditala is spaced in human proportion or vice versa, is explained in another context.

Don't you feel now that in Vaastu tradition a house is designed into a living organism, a material paradise on earth, going in harmony with gross and subtle qualities of nature?

It will be very difficult for the modern mind to digest these ideals. The secret behind such interactions between the composite elements of the 'space', if revealed, would generate wonder and implicit adherence to the rules. The substance under discussion relates to the virile semen which is generated by the male principle and passed on into the female. This is called 'bindu' or 'karu'. The qualities mentioned in the aforesaid context are the qualities of the 'bindu', reflected in the elemental substances such

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as earth, water, fire and air, the supporting material being the SPACE[1]. Those are all the subtle qualities or forces of energy contained in the live-cell, which cell is, in the present context, magnified into a macro-cell called building. In shastraic words, it is Bindu Griha or Garbhagriha. Based on this concept, practitioners say that **"வீடு ஓர் உயிர்ப் பொருள்" "Veedu ore uyirpporul".** House building is a living organism, just like the cell discussed here.

In other words, the space enclosed by the building does possess those qualities and they affect the inhabitants either favourably or adversely. The rules, if followed, as directed by the shastras, would enable the inhabitants to enjoy spiritual comforts.

Before closing the discussion, the designer is advised to keep the Brahmasthan vacant, unbuilt and unused for living purposes.

ब्रह्मस्थानं विनान्येषां सर्वेषां वास योग्यकम् ।।

"Bramhasthanam vinaanyeshaam sarveshaam vaasa yogyakam"

'Excepting the Brahmasthan other spaces are habitable'.

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1 Space is foetus, already mentioned during the earlier discussions. Hence living organism.

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26

ARCHETYPAL OR BASIC PATTERNS FOR HOUSE BUILDINGS

Vaastu Shastra is a grammar book of visual forms - As such there are certain basic patterns - Primal pattern is square - This is the plan of the micro atoms of cube - The universe is filled with or composed of such cubical particles of energy - The plan of the microscopic cube is Vaastu Purusha Mandala - This cube contains further, all the five elements - This contains light and sound called OM light and OM sound - The cube is indeed the structure of OM sound and OM light - This is discovered by Vaastu Science - Basic patterns are called Chatur mukham, Moulikam, Laangalam or Swastikam and Dandakam - Various patterns are derived out of these four archetypals - Grids and their functions - Kosas and their meaning - Material spaces so formed resonate with each other just like sound spaces of same dimensions resonate with each other - These spaces also resonate with the vibration of the occupants of the house - This is spiritual, peace and bliss - They improve health of body and spirit.

CHATURMUKHA - SQUARE & RECTANGULAR TYPES

The **Figure (1)** (vide diagram inside) shows a typical traditional square type residence - **"Chaturmukha Griham"**.

The traditional house patterns were made considering the various material as well as spiritual aspects, which greatly influence and promote peaceful living conditions. Our forefathers had strictly followed the principles of Vaastu shastra, as a result of which they had enjoyed a life of bliss and prosperity, with longer span of existence on earth.

The Chaturmukha Griha layout is designed on the Vaastu Purusha Mandala of 9 x 9 grid - **"Paramasaayika Padam"** (of gross nature). This grid of 9 x 9 units is a standard measure for all residential buildings , while the 8 x 8 grid

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- **"Manduka Padam"** (of subtle nature) is in common usage for temples and spiritual abodes.

The **Paramasaayika Pada Vaastu Purusha Mandala** has also four concentric belts called Kosas(Sheaths).

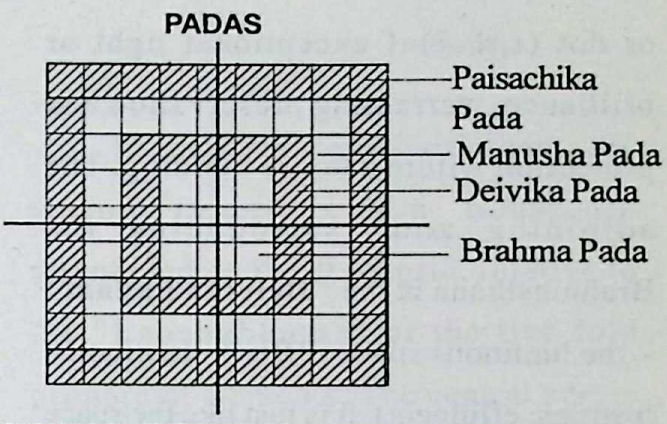
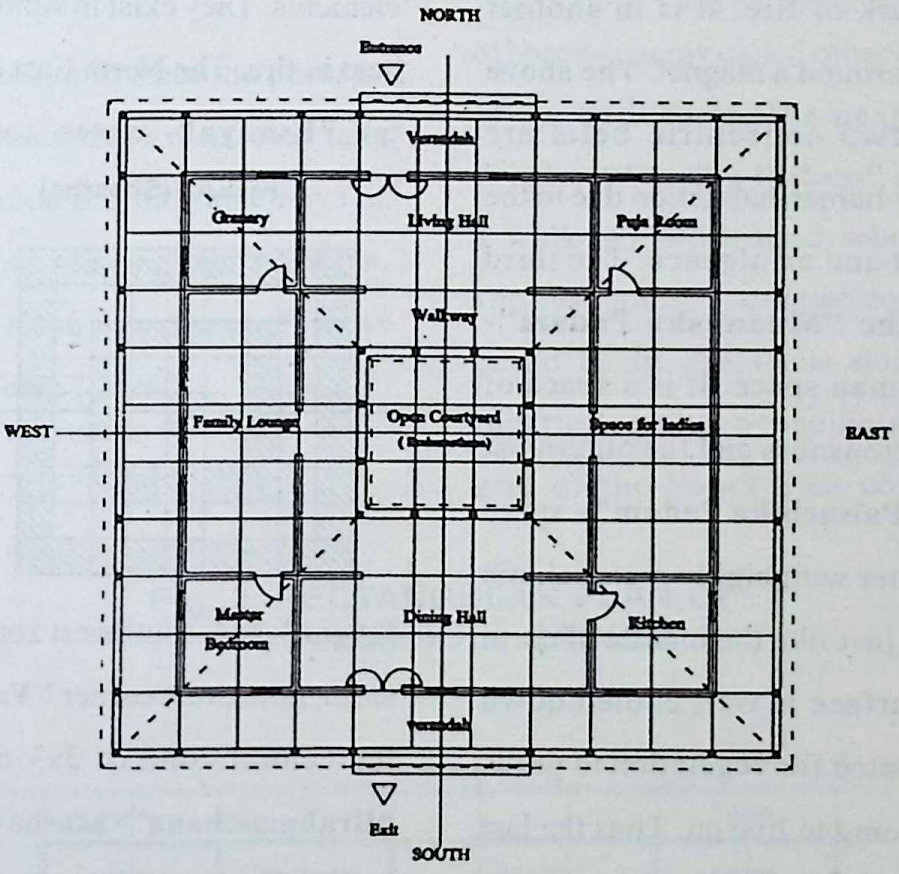


Fig. 1. CHATURMUKHA GRIHAM



They are the primal patterns of wave expanding from the core substance called **Moolam** in ***Tamil***, **Purusha** in ***Vaastu*** and ***Agama*** and **Brahmam** in ***Vedic Culture***.

Each of these four divisions has its own characteristic quality based on which the various functions of a design are designated. The central part or the innermost division is the **"Brahmasthanam"** or **Brahma Padam,** which is an intensive energy field within the built space and is the hottest zone of the energy grid. It is a zone with a point

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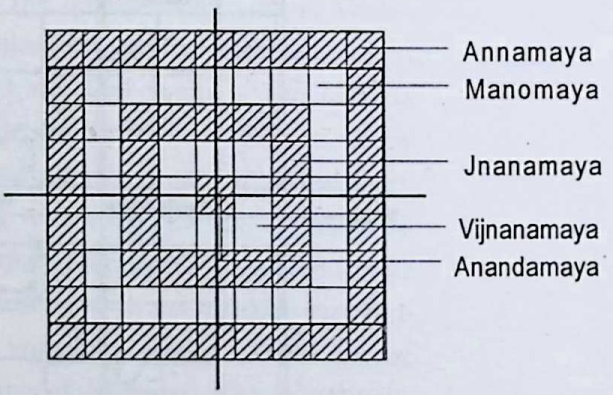
or dot (புள்ளி)of exceptional light or brilliance, warranting preservation and protection within a house building. The adjoining zone surrounding the Brahmasthana is the **"Deivika Padam"** - the luminous space (**"Div"** - luminous, lustrous, effulgent). It is just like the space around a spark of fire. It is in another sense a field around a magnet. The above mentioned two concentric belts are unsuitable for human habitation due to the extreme heat and effulgence. The third division is the **"Maanusha Padam"**- meaning human space. It is a space of human consciousness and the outermost zone is the **"Paisachika Padam"** - space of gross matter with highly materialistic quality. It is just like the mantle of earth where the surface is well cooled down and consolidated for vegetation to grow, and human being to live on. Thus the last two belts are the best suited for human occupation, for, these belts or zones possess the material qualities which give way for sustainable growth and development.

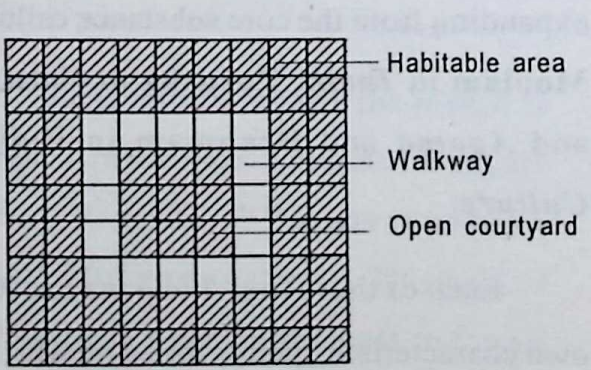
The Vaastu Purusha Mandala is basically an energy grid that has various positive and negative energies respective of every sensitive space. Each of the four corner zones (2 x 2 = 4 modules) of the mandala inclusive of the centre of 2 x 2 = 4 modules are occupied by the five primordial elements. They exist in subtle form just as heat in fire. The North East corner zone is the **"Esanya"**- water, southeast zone

KOSAS (Sheaths)



"Agni"- fire, southwest zone **"Niruthi"**- earth, northwest corner **"Vaayu"**- air and the central zone of 3x3 module is the **"Brahmasthana"**- akasha or space.

IDEAL ALLOCATION OF SPACES



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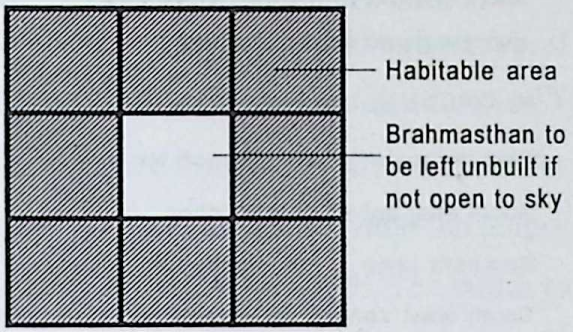
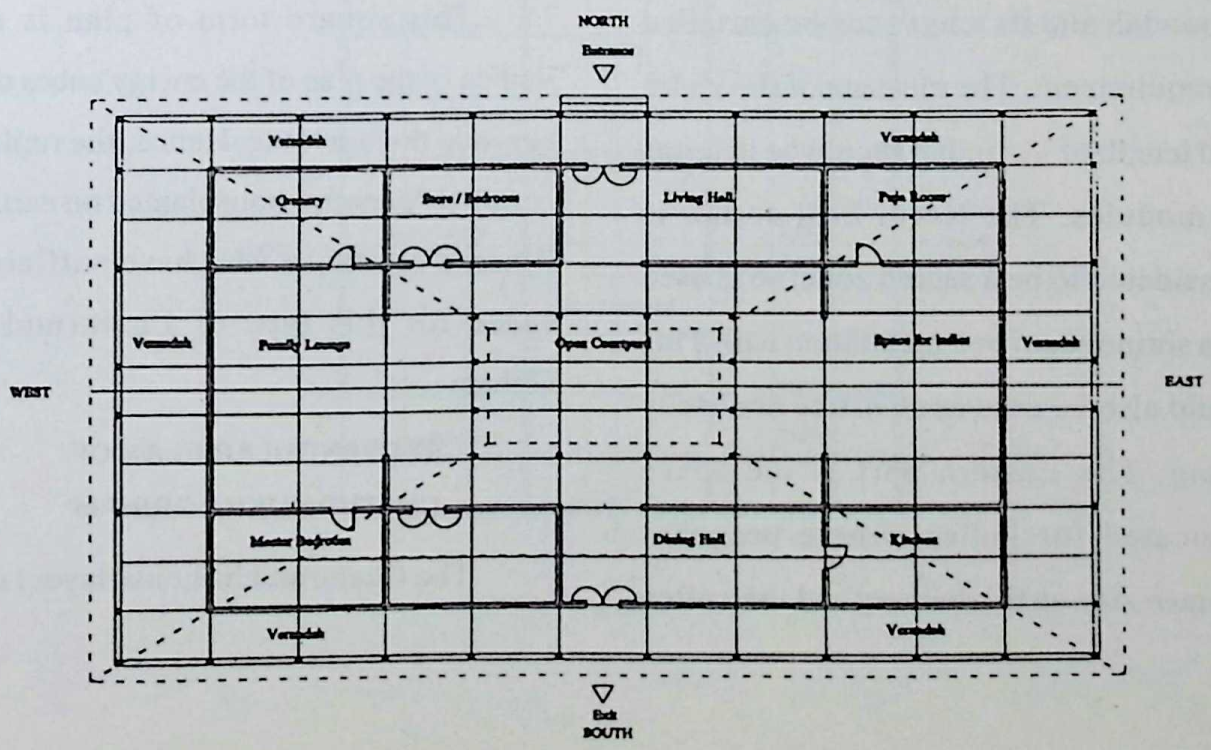
ALTERNATE DESIGN FOR SMALL HOUSES



When looked at from the point of view of the concentric Kosas, they take the name of Anna maya, Prana maya or manomaya, Jnana maya, Vijn na maya, Ananda maya Kosa from the outer Kosa to the inner square (bindu).

In the Chaturmukha Griham, the various functions of a house are distributed on the 9 x 9 grid, relative to the **"Panchabhutas"** or the five fold primordial elements. The central part is left open to sky as it is the hottest region of space - energy called otherwise the lung of the built form. The next concentric division **"Deivika Padam"** is utilized as a walkway all around which leads to various rooms. These two zones together could be of great use during family functions and get-togethers. The 2 x 2 grid of the South East corner **"Agni**

Fig. 2. RECTANGULAR PLAN OF CHATURMUKHA GRIHAM



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quarter" is used as a kitchen which is associated with fire. Another scientifically proven fact is that, this region has the infra-red rays, that enhances the health of womenfolk. The southern part acts as a dining hall which is also suitable for storage of vessels. The master bedroom is placed in the South West quarter, while the granary is located in the North West. The western part is used as a family lounge but could also be used as children's bedroom cum study. Since this layout is designed as a north facing residence, the living hall is in the North, led to from the entrance verandah which runs on four sides. It is advisible to have Verandah on four sides or on any side as India experiences a tropical climate. But the Verandah and its length can be curtailed to requirement. The measure of the width and length of Verandah should be in terms of modules. The North East corner is considered to be a sacred zone, so is used as a shrine room or a meditation hall. This could also be used as an office or a study room. The Eastern part is the space allocated for ladies, where pregnant women stay on till delivery and thereafter.

पूर्वायां श्रीगृहं प्रोक्तं आग्नेय्यां स्यात् महानसम् ।
शयनं दक्षिणायां स्यात् नैऋत्यां आयुधालयम् ॥
भोजनं पश्चिमायां स्यात् वायव्यां धान्यसञ्चयम् ।
उत्तरे द्रव्य संस्थानं ऐशान्यां देवतागृहम् ॥

The meaning is

Eastern zone	-	Space for ladies
South east zone	-	Kitchen
Southern zone	-	Bed room / dining
South west zone	-	Master bed/instruments
Western zone	-	Dining / bed / childrens' study
North west zone	-	storage of grains
Northern zone	-	cash and jewels
North east zone	-	Pooja room / study / reception

When a house is designed as per the above circulation, the house gets transformed into a living organism and shall start pulsating in harmony with the vibrations of the inmates.

This square form of plan is the replica of the plan of the energy cubes that pervade the universe. Hence, the replica is called "paradise transplanted on earth". Blessed are those who have sufficient space for this type of Chaturmukha Griham.

RECTANGULAR PLAN OF CHATURMUKHA GRIHAM

The Chaturmukha house layout can

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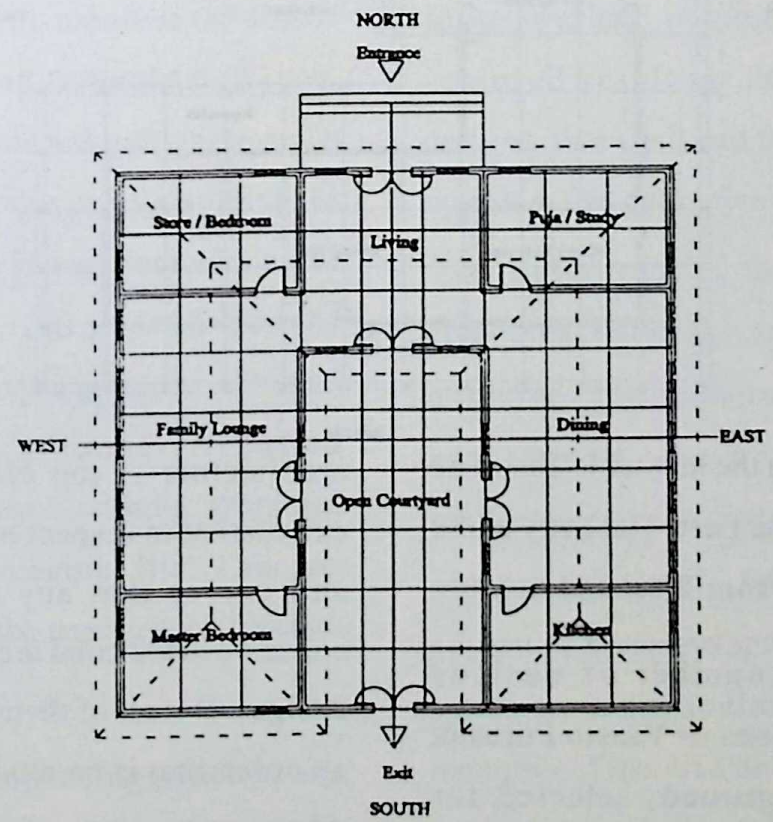
also be designed or conceived in a rectangular four sided layout . The **Figure (2)** (vide diagram) shows a typical **"Rectangular Chaturmukha Griham"** with entrance from north. The width of the house is a fixed measure while the length varies in terms of the width. The width to length ratio is always of the order of 1:1¼, 1:1½, 1:1¾ or 1:2 and so on. If the ratio of the width to length is high so as to give an elongated appearance of a stick (Dandam), the griham designed with such a ratio is called **Dandaka Griham.** The circulation and other functional aspects are the same as those of the Chaturmukha Griham.

MOULIKA GRIHAM

The **Figure (3)** (vide diagram) shows a **"Moulika Griham"** with entrance from north. In this type, the southern part is deleted. The same could be done on the other three sides also. The primordial elements are maintained in this pattern and the placement of rooms are also well maintained in relation to the panchabutas.

Fig. 3. MOULIKA GRIHAM



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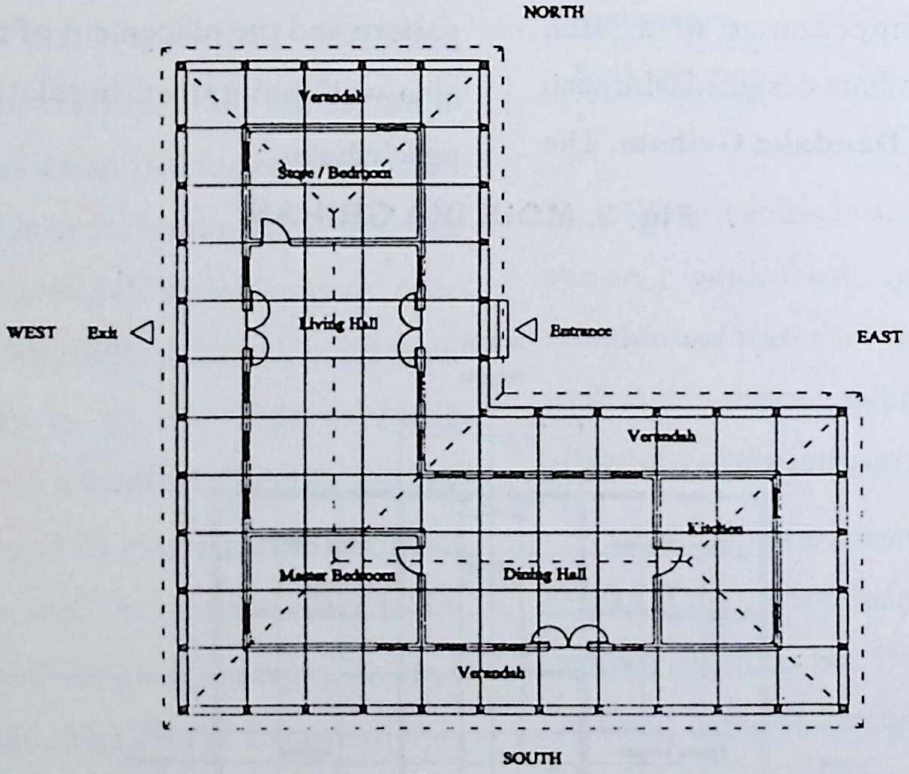
LAANGALA GRIHAM

The **Figure (4)** (vide diagram) is the **"Laangala Griham"** where the direct North, North East and the direct eastern parts are deleted. This orientation is the only acceptable L pattern for human residences because the major elements of the panchabutas - agni, niruthi and vaayu are retained within the habitable area. The entrance is from the East. The entry could also be designed from West and South.

There are number of designs illustrating locations of Vaastu Purusha Mandalas on a ground, selected for building purposes.

There is a talk that Indian Architectural planning is concerned only with a square one or a rectangular one and thereby the growth of Indian architecture as a whole stands stifled. This is utterly wrong and this is a comment by those not at all related to or initiated into Vaastu field. The casual look at various parts of the temple shows that Indian architecture is too elaborate and too exhaustive in respect of patterns. Lines and curves that any architect could conceive in his mind are noticeable in the designs. But all of them are governed by an order, that is on modulated measure. At the same time, if one looks at the

Fig. 4. LAANGALA OR SWASTIKA GRIHAM



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modern design casually, they are also dealing with square and rectangle forms

with the circle and semi-circle, octogonal and polygonal forms added here and there. The purpose behind such introduction is almost for enhancing the aesthetical look but not in the interest of subtle aspect of spiritual experience. We have to remember that it is the unseen or invisible force that rules the material world. Please remember again that it is the subtle invisible field around the magnet that attracts iron pins. This concept of Vaastu is the key note of all building forms and influence human activities. To live in harmony with subtle nature is the aim of Vaastu science and technology. Hence, there is a grammar behind whatever is introduced in a house or any building. In as much as there is a grammar of aural forms, in this Indian tradition of architecture, there is a grammar of visual forms. Such a grammar is called technology. Designs without grammar cause miseries in actual life. This has yielded place for the emergence of Vaastu Pandits.

In the accompanying patterns, one would find that whatever human mind can think of and flexible for constructions would be find incorporated. What is very very significant and important is that the so called **Thai manai** or main house where kitchen, bedroom etc. are provided, should alone be either square or rectangular. Indian architecture is the most aesthetical and even intricate for anybody to adopt or adapt casually. It is a grammar of visual forms. This grammar is concerned with subtle and gross elements that permeate the entire human activity. This cannot be ignored or dismissed.

By using the above said archetypal forms, various combinations could be achieved resulting into innumerable designs, that shall suit the modern design world. A few examples are shown below.

Before closing the discussions, on archetypal patterns, one thing has to be observed. The modern architects, here and abroad, are conscious of the importance of the division in an orderly grid over the land - space. It facilitates allocation of various spaces on a large land space in a particular order. But the meaning of the grid or the effect of grids on human existence with respect to a

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building (built space) is not known as we find in Vaastu Shastras. Further that the spaces so developed, cause negative or positive effects on human life is also not known. The Vaastu Shastras do provide the missing link (vide chapter on phalasruti.)

Another factor to be reckoned in the creation of grids is that a harmony has to be established through numerical measure dealt with under Manduka Vaastu Mandala and Paramasayika Vaastu Mandala. That is to say, numerically, even - number goes in harmony with those of even-numbers and odd number with odd numbers. In other words, numbers resonate with each other in a particular order. This is one of the great discoveries of Vaastu Vedins. This important point is discussed elaborately and repeatedly in other chapters.

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27

TOWN PLANNING

Under the title Bhumi Vaastu, village and town planning are dealt with elaborately in the Vaastu Shastras. The designing of Villages, towns and cities has gone out of practice after the advent of alien rules in India. Just to study and high light the relevance of the principles in today's context, as found in Vaastu treatise, a qualified architect of contemporary school of architecture and town planning, already initiated into the Vaastu planning and designing was offered an opportunity to discuss and record unbiased impressions with illustrations in this chapter. The readers would find this chapter unfolding a good number of hidden factors and offer guidelines to apply them for the betterment of the current system and bring comfort and peace to every hearth and home.

The planning of settlements and townships has already been well described in our ancient Shastras and traditional treatises, which are the most precious information that are passed on to our hands by our ancestors. They had developed a sense of space and time and knew the importance of honouring the primaeval forces. The neglect in preserving and following these principles for planning our settlements has led to a total disastrous situation. Our life has become miserable with the massive destruction of our environment. No longer is it possible to dwell in towns and cities that make little or no reference to the environmental problems that affect our health and well being, let alone our spirit.

Since the emergence of mankind on the earth, we have relatively led a life of peace and bliss by enjoying the nature's immense and pure resources of food, water and air.

Change is a term that is wanted by human beings at every stage in life. Owing

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to this instinct of experiencing changes, man has caused a disharmony in the ecosystem. The delicate balance that was previously maintained with nature has undergone a severe blow which has caused an ecological imbalance. In the early stages, man's interventions with the nature's formulae were in a micro level with less and scattered population. With the gradual growth in the population and development of dense settlements, abundant resource of the nature is well exploited leading to scarcity and pollution. The problems that we face due to negligence in planning the township, are many and much care has been taken by the government to solve it. The problems that we face are:

1. Increase in slum growth and unauthorised settlements leading to public nuisance,
2. Traffic congestion,
3. Frequent occurance of accidents,
4. Haphazard roadway layouts,
5. Improper water supply systems,
6. Unhygenic surroundings due to inefficient sewage disposal systems,
7. Rain water stagnation spreading diseases,
8. Insufficient vegetation and unauthorised deforestation,
9. Reduction in the land use area per person,
10. Public inconvenience due to irregular growth and non-zonal expansion.

The solution of the aforesaid problems lie in the hands of the town planners and architects. Only if they respect and follow the foot steps of the ancestors, they can achieve their goals in building up an efficient and stable living condition.

Planning of the cities and towns have to be in an orderly way with the main focus on the futuristic growth aspect of the population and the requirements that would support them.

Vaastu Shastra offers us the perfect system of planning a settlement with all the supporting functions well placed in point of view with the walking distance. There are various patterns of town planning adopted with respect to the site conditions. A few are illustrated here in this chapter. One common factor to be noticed even here, is that the layouts are on perfect grids.

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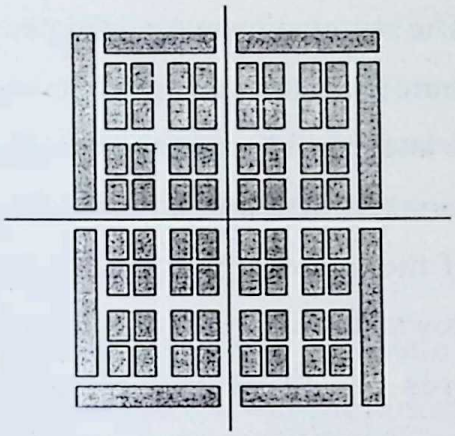
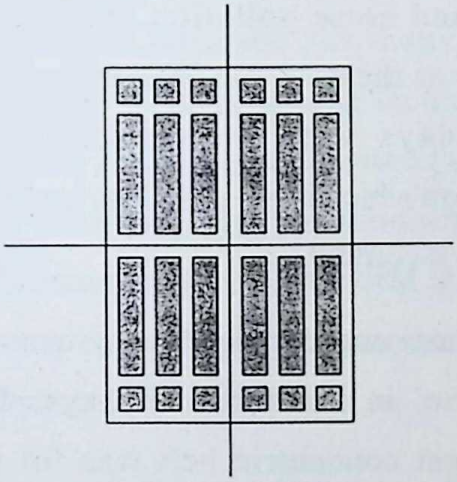
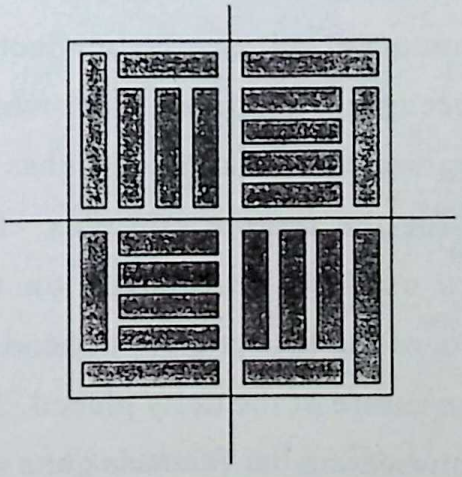
MODELS FOR SETTLEMENT PLANNING



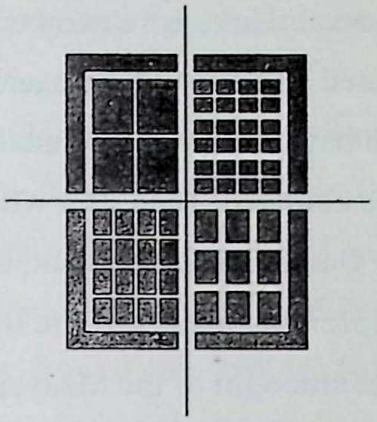
CHATURMUKHAM



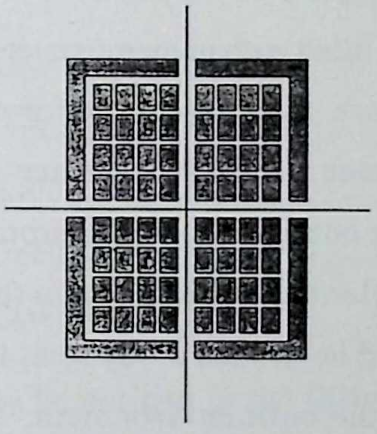
DANDAKAM



SWASTIKAM



PRASTARAM



SARVATOBHADRAM

The roadways shown in the above models of town planning are oriented along the cardinal directions and are in right angles to one another. City plan of Babylon, Mohenjodaro, Mandelay (Burma), Pondicherry (Tamilnadu) and Gautemala (Mexico) are layouts based on the modular grid systems. Similar grid systems were adopted in the design of pyramid and villages and towns in central and South America which were the master creations of the native of the land - "the

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Maayans". There are a number of theories invented by town planners and architects which have all turned out into utter failure in due course of time. But when we look at the Gautemala city layout, it is a living example that speaks of the intelligence and forethought of the Maayans who had well planned it out.

Space as we perceive is not empty but is filled with numerous energy particles that are all cubical in form. We can consider the earth's surface as a graph paper composed of numerous squares. The planning of layouts on this surface should be in such a way so as to resonate with the built environment. The layout should be in unison with the nature's energy grid. Every small square is a Vaastu Purusha Mandala and at the same time it acts as a single Vaastu Purusha Mandala as a whole. In other words, multiple of a single small energy atom or the paramanu has the same quality in the macro level also.

The ancient system of planning had taken care of the scientific theories and the planners has assimilated the principles which they had incorporated in their designs. The olden systems of planning were mostly of concentric square or rectangular pattern with various belts allocated for various groups of people segregated based on their occupational status. The segregation among the people was a purely business related custom which in later period got transformed into socio-economic discrimination leading to a fall of the age old practise. Even in today's town planning rules, the industrial structures are to be placed on the outskirts of a settlement to avoid air, water and noise pollution. This is no wonder as the rule was implemented in those days with utmost care and perfection which is not of much relevance in today's context.

The concentric planning system was beneficial in a number of ways. The outermost concentric belt was for the working class, followed by the merchants and business class, the ruling class in the next consequent belt and the intellectual class occupied the inner belt which encompasses the central zone that has the palace for the temple complex. The temples used to be located on the outskirts of the layout also, depending upon the nature of the deity placed. The deity representing the Taamasa guna will be located far away from the settlement.

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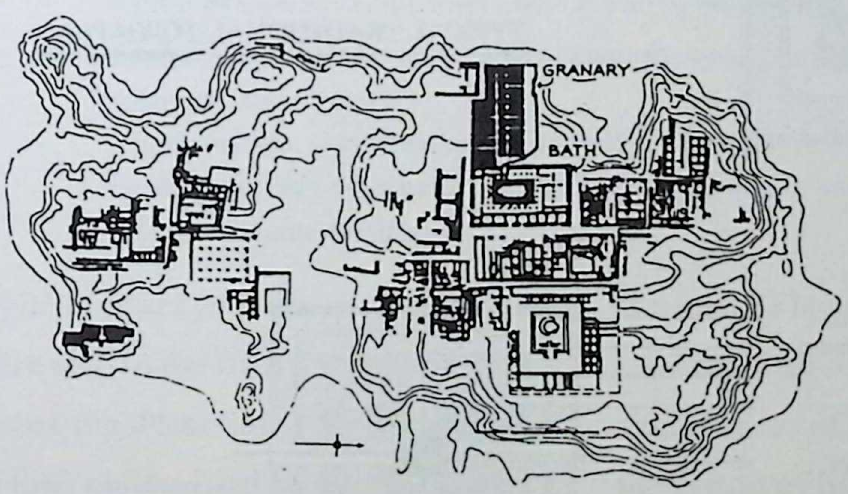
This type of planning was adopted in the ancient city plans of Dwaraka, Kadavur, etc. which are seen no more due to the devastating effect of nature. "Thenpanai nadu" and "Vadapanai nadu" were also good examples that had followed Vaastu principles and laid on grids of 7 x 7 modules.

With the fall of occupation based classicism, the implementation of traditional planning methodology may sound unpracticable for many. If we notice the above planning technique in depth, it can be well understood that this was a zonewise classification which can be followed for today's world also. The illustration given below shows the transformative analysis of a typical traditional layout into a present day zonewise segregated township. A zonal division for planning a township can cause a harmony in the surrounding locality by minimising the critical problems. The basic needs for a human being to dwell can be listed out based on the essential requirement of certain commodities and the walkable distance. The zones can be divided as,

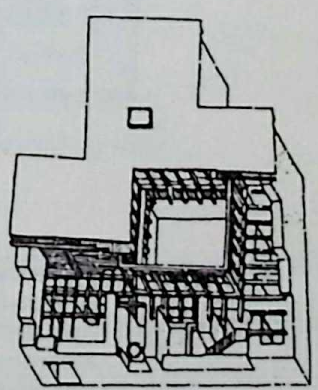
1. Residential zone.
2. Commercial zone.
3. Educational zone.
4. Occupational zone.
5. Entertainment zone.

It may be noticed in the following diagram, that the concentric belts of the traditional layout are different from the

Mohenjo-daro



PLAN OF CITADEL



TYPICAL HOUSE

Courtesy: History of Architecture by Banister Fletcher

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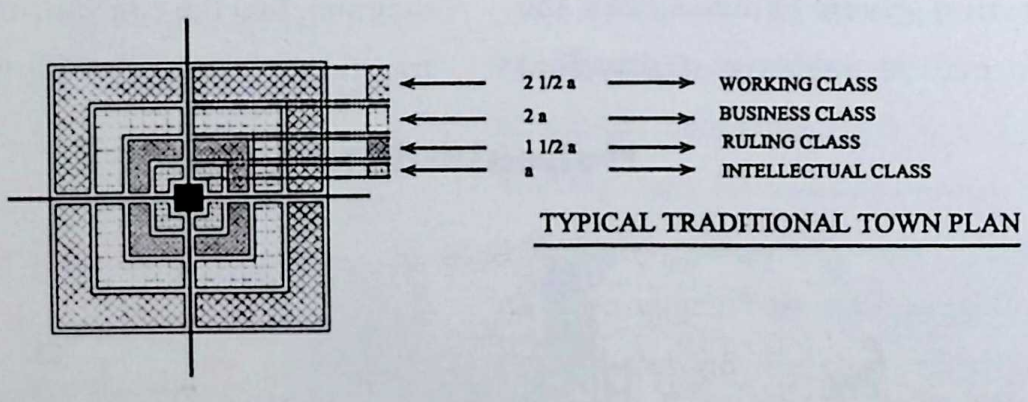
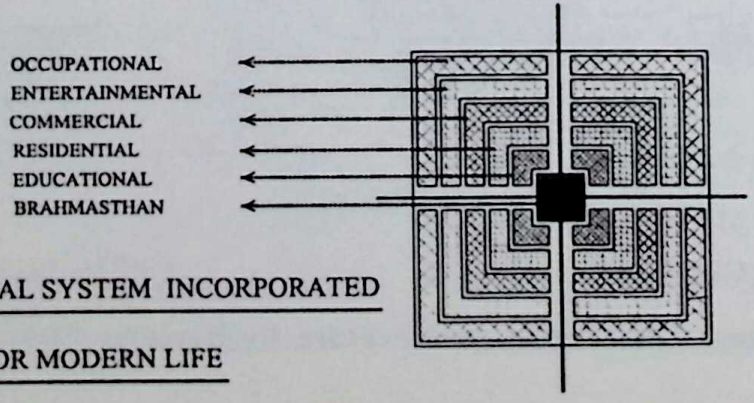
belts of the modified layout. In the typical traditional system of town designs, the ratio of the population belonging to various types of people was found and the area for each group was derived. The zoning of the different areas was also done in an orderly manner. The width of the inner most belt was taken as a module and the expansion of the consequent lateral belts were in terms of that width factor as is indicated in the diagram. For modern usage the concentric belts can be arranged at equal intervals as shown or can be modified based on the density of the population and their requirements. One of the concentric belts can be left open to sky with dense vegetation and parks for children to play. This green belt will enable the creation of a sound and healthy atmosphere. The provision of a green belt may be a modern concept but there is no treatise that prohibits such creative usage of space which has several beneficial factors.

This chapter has not dealt with the entire principles of planning a township but atmost care has been taken to present the vital factors that have to be rendered to establish a settlement that can inhabit a mass of people, who can experience a serene and soothing atmosphere for the soul and the body.



TYPICAL TRADITIONAL TOWN PLAN



TRADITIONAL SYSTEM INCORPORATED FOR MODERN LIFE

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28

OUTLINES OF TEMPLE ARCHITECTURE

Architecture is of four kinds - They are Boom yadi Vaastu, Prasadadi Vaastu, Yanadi Vaastu and Sayanadi Vaastu, denoting respectively land, building, vehicle and furniture - Under Prasada Vaastu falls residential as well as temple architecture - Though this treatise focusses on residential building architecture, some glimpses of temple architecture deserve to be included - Temple architecture actually represents the cream of Indian spiritual culture - Almost all principles that the Vaastu Shastra harbours in its mind are noticeable in temple architecture - Since it is an edifice adoring the glories of the 'supreme substance' this architecture has come to be elaborated extensively in all the Vaastu Shastras giving secondary status to residential and other structures.

In the chapter that follows, a little bit of aesthetical and spiritual aspects is also dealt with just to arouse the interest and attention of not only overseas scholars but also our own, who have not turned their attention to Vaastu Shastra till date - The temple architecture is divine and it is worthy of worship as the form of God. This is the keynote of this chapter.

It is beleived that this small chapter would evoke considerable interest in temple architecture.

It is hoped that this chapter will dispell all false impressions left afloat by those writers who have been neither initiated nor interested in the hoary traditions of Bharat.

The temples in India have played a versatile role in the life of its people and have been the dominant and inseparable part of their cultural and spiritual activities from the early times. People, from the crown to the common, from the saint to the scholar have frequented temples and held them as sacred objects of worship and sources of solace and bliss. In fact, the cream of Indian culture is enshrined in the temples. The cultural life of the Indian race is built around the temple. This

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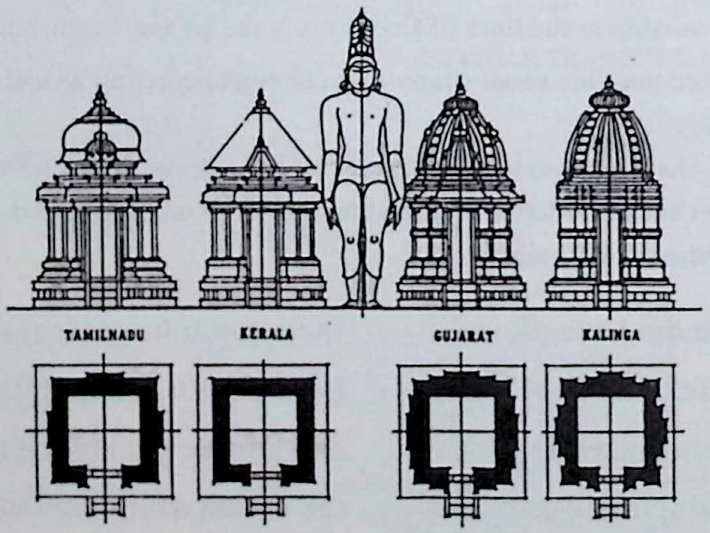
culture is spreading fast today, all over the world. This system of temple culture has not been replaced by any other system upto this day. It is so strong, effective and efficacious that no alternative became possible. It is based on truth, not on mere faith.

Modern scientific analysis of a temple goes to establish that temple-space is surcharged with enormous positive energy and the visitors, frequenting the premises attain physical welfare and mental wellbeing. How could a mere structure built of stone or of brick and mortar contain that kind of energy? What makes the temple structure and the premises so powerful? What do the temple components like Garbhagruha, Mukhamandapa, Vimana, Gopura, Prakara, Minor shrines, Pillars and various other parts of the temple structure mean? Do they have any scientific basis or are they mere imaginative, artistic edifices to house sacred forms and symbols of religious concepts?

Against this background this chapter has been interpolated and dealt with here briefly so that the visit to a temple and the worship performed there may not be mechanical but a meaningful experience.

I am taking a typical south Indian shrine as an example though the concept underlying is common for all temples of India. The pan-Indianness of the concept is exemplified in the diagrams accompanying hereafter and the supporting textual statements appended for the scholars' references.



Pan - Indian concept of Temple form

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This chapter further discloses a scientific truth that ***a temple is not a home of God but it is the form of God***. In other words, the temple structure itself is worthy of worship and in that context, the God form installed inside is redundant or superfluous. There is truth in it, hence I am enboldened to say so. Temple building is not a congregational structure but a form of God structurally delineated.

You will be surprised to hear this statement from a traditional sculptor and architect whose very existence is hinged on the design and construction of temples and making of idols. God form as well as human form are material structures built around the spirit!! Am I not correct?

This aspect of the temple as a form of God is implied in the Upanishadaic statement of प्रासादं पुरुषं मत्वा पूजयेत् मन्त्रवित्तमः **'Prāsādam purusham matvā poojayet mantra vittamaha'**. The literal meaning is that the priest well versed in mantras shall look upon the temple building (prasada) as **Purusha** (embodied energy called **Vaastu Purusha**) and worship him with due respect. The meaning further noticeable in this context is that a temple building is a composite of the **Sukshma** (subtle) and **Sthula** (gross) aspects of the Supreme Being. The **Sukshma** is the subtle space enclosed in the sanctum and **Sthula** is the material form built around it.

The same concept is emphasised in another statement, where the temple structure is realized as देह (body) and the space contained therein, the जीव (spirit) देहो देवालयः प्रोक्तो जीवो देवः सनातनः **'deho devālayaha prokto jeevo devah sanātanaha'**. (देव derived from the root दिव् means not only the idol but also the luminous **akasa** and hence सनातन eternal). In the same vein, there is another upanishad which states, आत्मानं रथिनं विद्धि शरीरं रथमेवच **'ātmānam rathinam viddhi sariram rathamevacha'**, which means that the soul is the rider and the body is the chariot.

This is confirmed and elaborated in the **Thirumanthiram of Thirumoolar** in clearer terms when it says that ''உள்ளம் பெருங்கோயில் ஊனுடம்பு ஆலயம்'' **"ullam perumkoil oonudambu alayam"** where **ullam,** the conscious inner space is **perumkoil** and the rhythm bound spatial form or the expansion around the **perumkoil,** is the **alayam**. This interpretation is deeply scientific in that,

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the term **'alaya'** literally means **'laya pradhana space'** or **'rhythm bound space'**. In other words, the temple layout is the extended form of the **'rhythm'** of the inner space (the Daharakasa). This is the subtle difference that is noticeable in between the terms **'perumkoil'** and **'alayam'**. Therefore in the Vaastu tradition, the temple complex is designed according to what is called musical layam (or **swara vinyasa**). Hence architecture is defined as frozen music as well.

In all these discussions one would find statements based on personal experiences only which would not help a designer or builder to replicate into visual form that exists in nature. This is because they lack mathematical measures and organic parts (angas) for the designer to compose and give material form for the experience of truth.

In the traditional Vaastu Shastras, the concept of temple structure as the extended material form of the **jeeva** is vividly described in a technological language to aid designing of temple forms meaningfully. The temple form is designed into **Viswarôopa** (visible material universe). Is not the human body, an extended form of the inner being, the subtle into gross? The Vaastu sloka goes on thus:

उपपीठं चरणाकारं अधिष्टानं जानुमण्डलं, पादवर्गं कराकारं प्रस्तरं बाहुमूलकम् , तत्कण्ठं गलमित्युक्तं शिखरं मुखमेवच, उष्णीषान्तं शिखाचैव महानासीच नासिकां, नेत्राणां क्षुद्रनास्यौच विश्वरूपमिति स्मृतम् ॥

Upapeetam charanākāram adhistānam jānu mandalam, Pāda vargam karākāram prastaram bāhu moolakam, Tatkantam gala mithyuktam shikharam mukha mevache, Ushneeshāntam shikhā chaiva mahānāsicha nāsikā, Netrānām kshudra nāsyau cha viswarupa mithi smirutam.

There are a certain number of parts, with which the limbs of the temple structure are composed, just like the human form being composed of limbs such as foot, leg, thigh, torso, hand, neck, head and the hairlock. The components of the temple form, as expressed in physical terms, may be noticed in the accompanying diagram. The human scale **(taala unit/kaala maatra)** is simultaneously shown side by side. The subtle is in 8 units and the gross is in 9 units. The structure is the concept of Mayonic science wherein human laya (order) is brought into application.

There is a profound scientific concept underlying the creation of Vaastu structures whether it is a temple building or a house building. At present let us focus our attention on the temple structure. To

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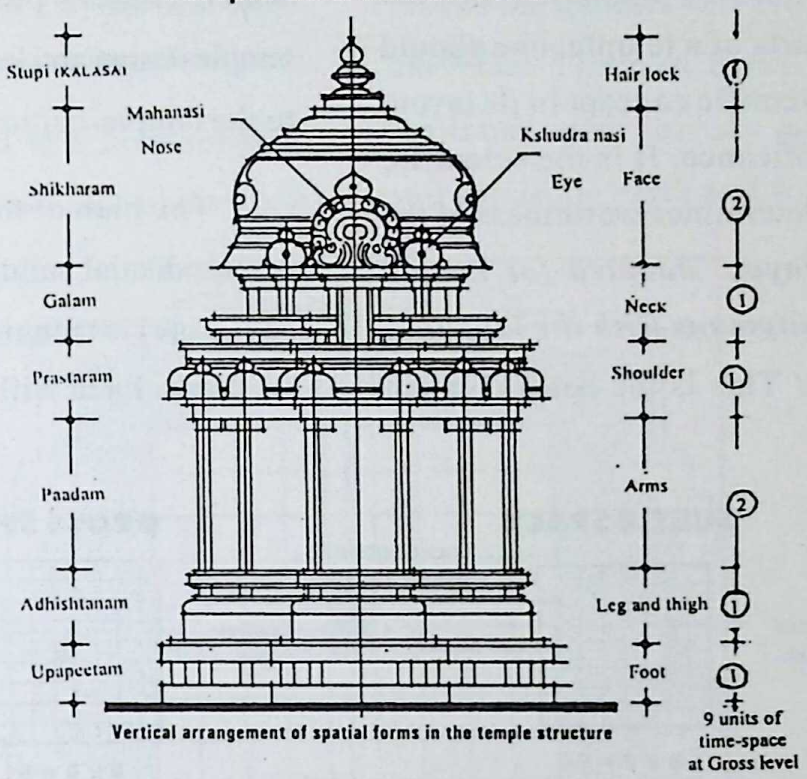
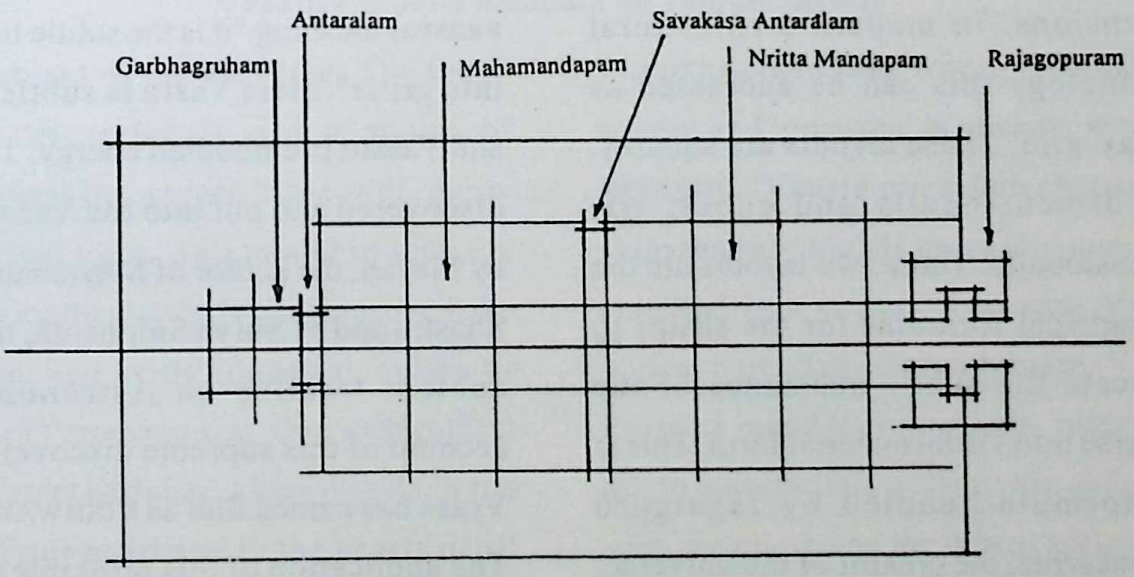
Temple as a human form



Vertical arrangement of spatial forms in the temple structure

Human scale : head 1, torso 3, thigh 2, leg 2 + (foot ¼ + knee ¼ + neck ¼ + skull ¼) = 9 units. This is the measure of the basic form, though there are many extrapolated forms based on the fundamental concept of taala-measure (Vide details of taala units as based on units of time-space and discussed elsewhere).



Horizontal arrangements of spaces in a temple complex

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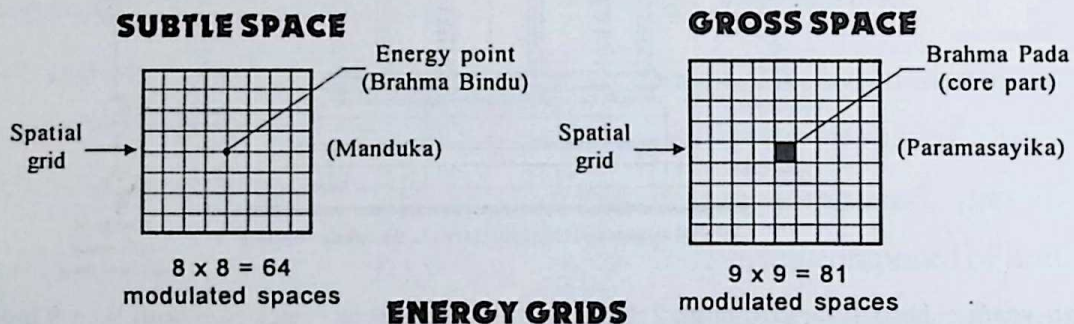
understand the composition of the structural parts of a temple, one should know the scientific concept in its layout and its significance. It is the scientific layout that determines worthiness of the form. ***The layout adopted for temple form is synonymous with the layout of the Cosmos!*** This is the basic concept which confers pan-indianness of the temple design and lends national character to the temple-culture.

The plan of the layout of a temple or a residential building (vide drawings on next page) is technically called Mandala or Vaastu Pada with a grid of 8 × 8 = 64



Vaastu Purusha Mandala

spaces or 9 × 9 = 81 spaces of equal dimensions. In modern architectural terminology this can be addressed as energy-grid. These layouts are squares, two dimensionally and cubes, tri-dimensionally. Those two layouts are the geometrical formulae for the **shilpi** to replicate the subtle substance of the universe into visual material form. This is the formula handled by Jagatguru Viswakarma, the creator of the universe, to turn his own thoughts into material forms. This formula is couched in a simplistic saying **वस्तुरेव वास्तु (vastu reva vaastu)** meaning "it is the subtle that turns into gross". Here Vastu is subtle energy and Vaastu is embodied energy. This was discovered and put into the Vaastu texts by Mayan, the author of Mayamata, Vastu Shastra and of Surya Siddhanta, the most ancient treatise on Astronomy. On account of this supreme discovery, Veda Vyasa has named him as VISHWAKARMA. The application of this principle confers sanctity on the man-made structure of a temple and makes it worship worthy. This is

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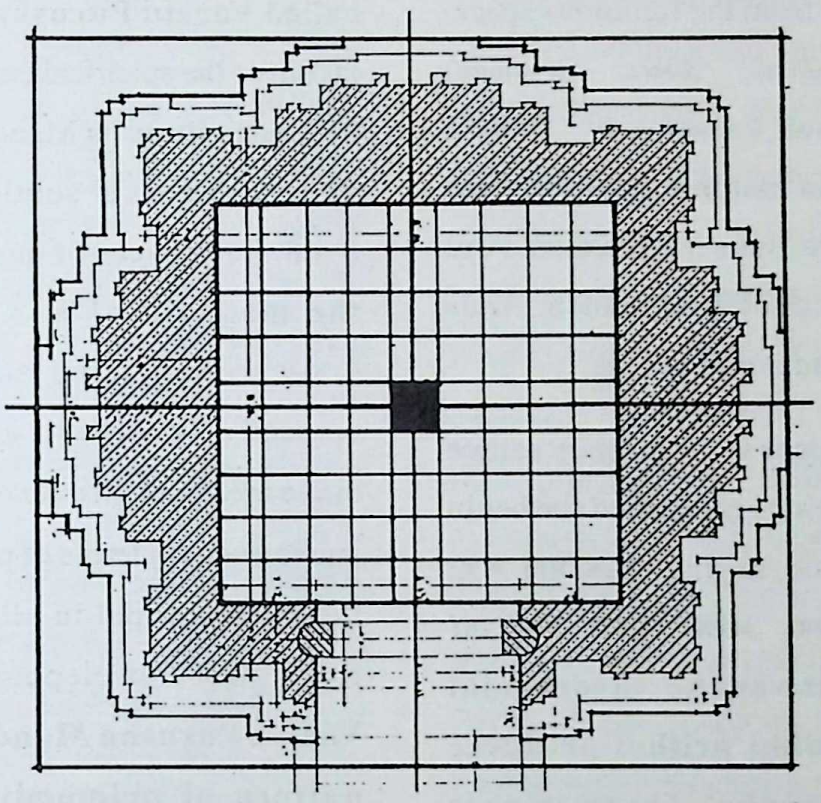
the scientific truth of the highest order underlying temple design and temple culture.

To understand this concept still more clearly, one has to go to the very root of the genesis and evolution of the universe. The root exists in the vast luminous space (akasa / ஒளிவெளி) that surrounds the earth and for that matter



Vaastu Purusha Mandala as Temple layout

every object of the universe. The space under reference is not a space of nothingness but a space filled with energy or spiritual light. As a matter of fact, the space is mathematically confirmed to have been packed with countless cubes of energy of Paramanu size. One such cubical space (दहराकाश daharākāsa) dwells in the cave of our heart and in the hearts of all animate objects of the universe. This cube with a square base is called **Vaastu Purusha Mandala** where 'mandala' is square and 'purusha' is energy. वास्तुपुरुषः चतुरश्र सम्स्थः **'Vaastu purushah chaturasra samsthaha'**-"the all pervasive energy is couched in a square" - so says Vaastu Vidya, a treatise on architecture. Vaastu Purusha mandala represents, infact, the micro universe and quality wise and shape wise the micro and the macro are one and the same. This is signified in the Vedic statement of अणोरणीयान् महतो महीयान्

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'anoraniyān mahato mahiyān'. That "the qualities of the 'anu' and 'anda' are one and the same" - is the meaning implied. This is because that both of them have originated from the luminous space. ''அண்ட மூலமாய் பிண்ட மூலமாய் கொண்டிலங்குஒளி வெளியென'' **'anda moolamai pinda moolamai kondilangu veli oliyena'** - so says Mayan also. Anu is part and parcel of Brahmanda. Anus are countless and Anda is one.

That the space is the primary source of all animate beings is justified further in the upanishadaic saying, **आकाशात् वायुः वायोरग्निः अग्नेरापः अद्भिः पृथ्वी पृथ्वीभ्यां ओषधयः॥ 'ākāsāt vāyuhu vāyoragnihi agnerāpaha adbhi prithvi prithivee bhyām oshadhayaha'**. The meaning is that the air, fire, water and earth have come forth in successive developments from the SPACE. The vegetation, further came out of the Earth, which acted as another space (source) called earthly space. The shorter version of this phenomenon is that the Earth came out of the Space or the Space is the source of the Earth. Infact, it is from one single paramanu that the Earth has come into being and hence the energy contained in an 'anu-sized subtle energy' and the energy contained in the Earth itself have come to be called by a common term **Vaastu Purusha** and hence the container and the content have together come to be called **Vaastu Purusha Mandala**. The layout of the spherical earth is identified to be Vaastu Purusha Mandala of $9 \times 9 = 81$ spaces whereas at subtle level, it was of $8 \times 8 = 64$ spaces of energy grid. Hence the mandala of 8×8 and that of 9×9 are said to be 'subtle' and 'gross' respectively. Area wise, the square and circle are equal, inspite of its growth from anu to anda (in terms of proportions). This theory is applied in all animate beings from insect to elephant. **The square Vaastu Purusha Mandala is the wave pattern of primordial energy and infact it is the primal manifest form of the non-manifest,** which grows into material form ultimately. All visual and audible forms come under this theory. The resultant mathematical formula is that $\square = \bigcirc$, meaning that the subtle is qualitatively and quantitatively equal to gross. This is signified in the Vaastu sutra **वस्तुरेव वास्तु 'Vastureva Vaastu'**. This is the science of the highest order, which is the ruling element of Vaastu grammar. This is where the 'matter' and 'energy' exist

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unified in nature. This is expressed unambiguously by Mayan himself in Mayamatam which is named as **'Vastu shastra'**, not **'Vaastu shastra'**, thereby meaning that Maya's science is the science of the universal substance, the ENERGY and MATTER. He says, **प्रासादादीनि वास्तूनि वस्तुत्वाद् वस्तु संश्रयात् । तान्येव वस्तुरेवेति कथितं वै वस्तुविद् बुधैः ॥ "Prāsādādini vāstuni vastuvād vastu samsrayāt tānyeva vastu reveti kathitam vai vastu vid budhaihi".** The meaning in simple words is that buildings, be it a temple or a house, are all embodied energies, signifying the co-existence of energy and matter (Vastu and Vaastu). Is this not the unified theory of energy and matter? The same unified theory of energy and matter is expressed in the concept of a 'letter' as a composite of உயிர் (Uyir) and மெய் (Mei), where உயிர் is energy and மெய் is matter. In English உயிர் is vowel and மெய் is consonant. According to Mayan, the SPACE 'akasa' is the 'unified field' as it is the source of energy and matter. This is the cream of **Mayonic science of Vastu and Vaastu.**

So Vaastu Purusha Mandala, the plan of the primordial cube of energy is utilized as the plan of the temple, as per the directive of Vaastu shastra. How sacred and scientific is the principle governing temple form? Is this not secular and universal? The three dimensional cube is the basic structure of the sanctum into which is placed the idol for worship. Around the cube a variety of bands and motifs are added on to give a pleasing alluring look and to conform it to human form in structural terms. This cube is traditionally denoted by the epithets சித்ரவை (Chitravai), சித்ரம்பலம் (Chitrambalam) and சிதம்பரம் (Chidambaram) which means 'mini hall'. This I have named as 'Micro-abode' and 'Microbode'. So every temple structure, as per Vaastu tradition, is a microbode, within which the free space is enclosed. What does this microbode, the mini hall contain? It is a spark of cosmic fire that lies centered. This is called Brahma bindu or ஒளி அணு **Oli anu.** This is again OM light, the vibration of which causes the Om sound. The vibration of this Om light is called Time i.e. காலம் **Kaalam.** The vibration of the primal OM light is the dance of Lord Shiva (காலன்) and that of sound is Uma (காளி). Hence 'Omkara' Natana. Uma is 'word' (vaak) and Shiva is 'meaning' (artha). So Mayan says that Kaalam is the creative element of all the

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objects of the universe and adds that the universe itself is the product of Time. ''காலமே எவற்றுக்கும் மூலம். காலமே கோலத் தோற்றம். காலமே ஞாலத் தோற்றம். காலமே விந்தை செய்யும்''. (மயன்) "Time is the creative source of all objects. It is time that changes into form. It is time that blossoms into the universe and Kaalam thus does wonders"-Mayan. Therefore Kaalam itself is designated as Kaala Brahman. Kaalam, in simple words is the speed or vibration of energy or light. To confirm this phenomenon, I wish to quote an upanishadic saying, ''कालोहि ब्रह्ममिति के चित् वदन्ति''. **"Kālohi brahmamiti kechit vadanti".** The meaning is that some are of the opinion that Time itself is the Brahman.

Skaanda purana is supportive of Mayan's discovery in the following words **कालः सृजति भूतानि। कालः सम्हरति प्रजाः। सर्वे कालस्य वशगाः। कालो तस्य वशे स्थितः।। "Kālaha srijati bhutāni, Kālaha samharati prajāha, Sarvey kālasya vasagāha, Kālo tasya vase sthitaha".** Time causes the existence of all objects of nature. All that created by Time gets destroyed by Time. Everything rests in the hand of Time. That Time rests indeed in the hand of **Skanda.** 'உண்மை விளக்கம்' 'unmai vilakkam' a saivite treatise states that 'all appearances emanate from vibrations' 'தோற்றம் துடியதனில்' **'tottram tudiyathanil'.** The summum-bonum of these discussions is that vibration causes all phenomena. This concept is extended to poetry, music and dance where Kaalam is redesignated as Taalam (தாளம்) (maatra kaalam), the ruling element of all forms of poetry, music and also dance. What would be unique and astonishing is that the same Taala measure is extended to create visual material forms (time-spaces) of which one is the building whether it is a temple or house. Sculptural representations are also born of this scientific theory of rhythm (Taala) and therefore they are divine and worship worthy.

The concept of Vastu, in this context, is that it is the minute cell of energy (microbode) which changes itself into material body (vaastu) by virtue of the vibrations emanating from the energy. In other words, all living organisms have sprung into material existence out of the seed and speed of divine energy. Hence the sanctum, is held to be a living organism capable of 'vibrating from within and spreading into a space of energetic particles'. These vibrations have been

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quantified just as we have quantified the sound vibrations emanating from a stringed instrument of music. These measures of sound vibrations have been assessed to be equal to material vibrations and thus got extended to create material spaces called buildings.

Another important concept of Vaastu is that this small cell of energy is called 'foetus of space (விண்கரு Vinkaru)' or 'garbha (गर्भ)' by which the structure has come to be called **Garbhagriha** (கர்பக்கிருஹம்) and **Karuvarai** (கருவறை). Also called Bindu Griha (பிந்துக்கிருஹம்) in Agamas. 'Karu' கரு is the energetic space-atom and the structure enclosing it is 'Arai' அறை. Our Garbhagriha structure is so designed in terms of frequency of vibrations called 'rhythm' that the energy-waves emanating therefrom, are productive of positive effects on human psyche, in as much as musical vibrations are controlled by numerical adjustments to produce sweet sonic effect in human mind. Because of such structural vitality one feels edified when one steps into the temple ambience or stands in front of the sanctum. This will happen irrespective of the structure enshrining an idol or not. Such is the spiritual significance of the very structure of Garbhagriha.

Before closing the discussion on the sacredness and scientific basis of temple architecture (applicable to building architecture as well), I have to add one more point of profound significance which has been the element of attraction and the secret behind the benefits being derived and enjoyed by the temple-goers.

We have seen already that the space is the source of all objects of nature. Since a particle of the free space is enclosed in our material body, we call ourselves living organisms (உயிர்ப் பொருள்கள்). If that particular element of energy escapes from our body, we become dead. So anything enclosing that kind of space can be treated as a form with life (பிராணி). This is how the formless space takes form also in the material world.

Now, extending this theory of space turning into form (when gets enclosed), to the building architecture, the Vaastu has another point of profound significance for all of us to hear and enjoy.

If a part of the vast space is isolated and bounded by a four walled

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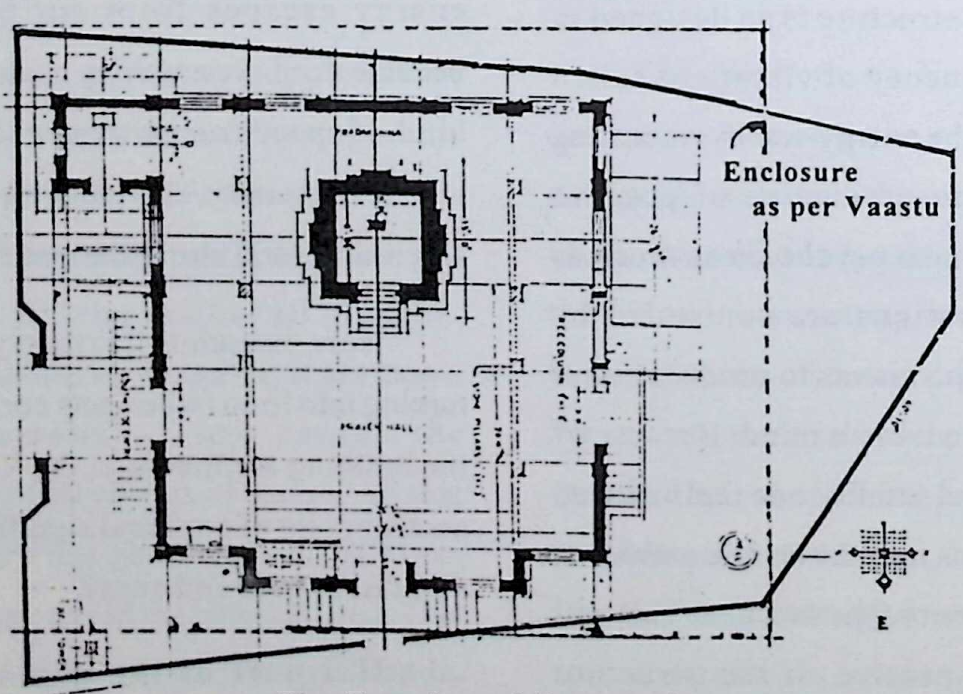
structure called building (the building) becomes a living organism and starts pulsating from within, like a human being. It emits energy-waves, the impact of which, changes the behaviour of living beings including man. The impact may cause positive or negative effects on human psyche, depending upon the choice of measures adopted in the design. To change the negative effects, the Vaastu shastra has brought forth a formula by which a **harmony between the human vibrations** (measured numerically) **and that of the vibrations emanating from the building** (measured numerically) **is established.** This kind of harmony, brought out by mathematical calculations, leads one to enjoy physical welfare, spiritual wellbeing and further leads on to the realm of peace and bliss. Hence in the design of buildings, be it a temple or house, choice of measures and proportions plays a key role in the traditional architecture. Arbitrary measures, if adopted consciously or unconsciously, in a building design, would be harmful and turn the building sick affecting the people living therein. The interior spaces of a building also call for an order without which no benefit of peace and bliss would be available. This order exists in nature, in the primal design of Vaastu Purusha mandala, which I have discussed as the very plan of the sanctum and the surrounding spaces constituting the temple complex called **'aalaya'**.



The Temple and its complex

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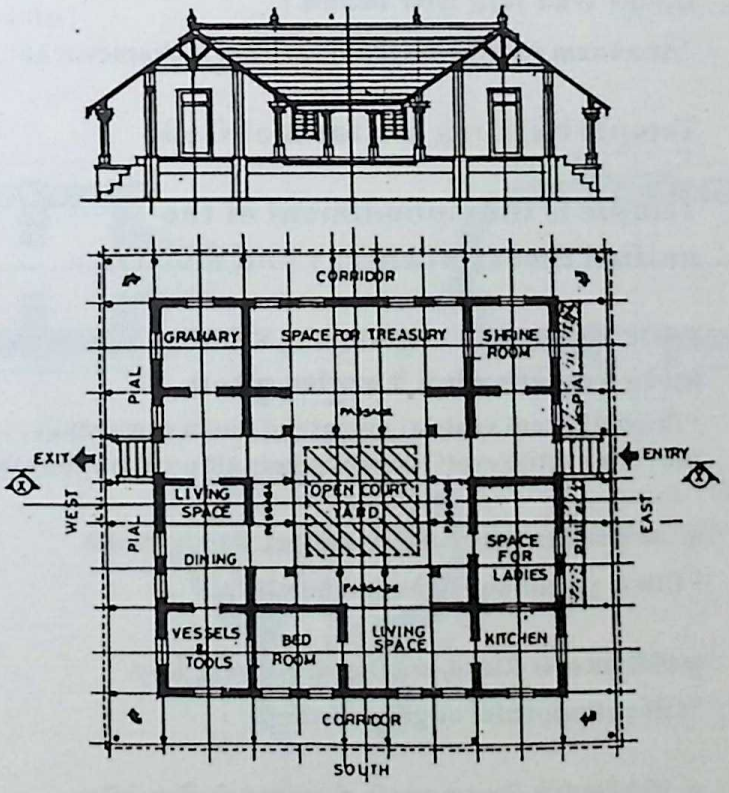
Look at the plan of the mini temple, with the space enclosed in the Garbhagriha, taken as the primal unit (of time-space) and expanded all over the complex to create uniform musical ambience or ambience of spiritual light. The whole temple-space is made to vibrate with spirituality. If one could produce sound out of the cube of the inner cell and allow it to come out into the complex and fill the space around, don't you feel that the whole space would reverberate in harmony with the sound of the inner cell? So every minute particle (paramanu) of the temple space would resonate with each other producing **'gamaka'** of the musical field. If the effect is 'sunaada' you experience the 'SPIRIT' in full measure. This is **'Rasanubhava'** or **'Paramananda'**, the supreme bliss, that we temple-goers experience.

This is a scientific phenomenon. Let me complete by saying that the music is enjoyable because of the science underlying musical composition and rendering the song. These are musical forms heard and enjoyed at heart. Similarly, the same science underlying the musical forms are visually seen and experienced at heart. The effect is one and the same.



Ground Plan

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We have discussed about the ' ***Cubical anu'*** as the miniature Universe or microbode where the ' ***Cosmic Being'*** exists in vibrant stillness and which goes into action, as and when it feels, metamorphosing itself into material forms of its own thoughts. All forms of nature from insect to elephant, including man, have had their abode in this micro-abode before they came out into the world of reality and into which they get back and rest in peace ultimately. This is not speculative or imaginative but scientific, based on the Indian concept of ' unified field of Energy and Matter' , and on the theory of 'unified-field' , ***the akasa.***

Quotes brought into focus

प्रासादं पुरुषं मत्वा पूजयेत् मन्त्रवित्तमः
"Prāsādam purusham mathvā pujayet mantra vittamaha".

देहो देवालयः प्रोक्तो जीवो देवः सनातनः
"Deho devālayah prokto jeevo devah sanātanaha".

आत्मानं रथिनं विद्धि शरीरं रथमेवच ।
"Ātmānam rathinam viddhi sariram rathamevacha".

Temple building is a form of God.

Temple is the embodiment of the unified theory of energy and matter.

प्रासादादीनि वास्तूनि वस्तुत्वाद् वस्तु संश्रयात् ।
तान्येव वस्तुरेवेति कथितं वै वस्तुविद् बुधैः ॥
"Prāsādādeeni vāstuni vastutvād vastu samsrayāt
tānyeva vastu reveti kathitam vai vastu vid bhudhaihi".

உள்ளம் பெருங்கோயில் ஊனுடம்பு ஆலயம்
"Ullam perumkoil oonudambu alayam".

ஒளியொலிப் பொருளாய் ஒங்கும் எழுத்தே
"Oli yolipporulai ongum eluthe".

உயிர்மெய்ப் பொருளாய் சிவணுதல் இயல்பே
"Uyir meipporulai sivanuthal eyalbey".

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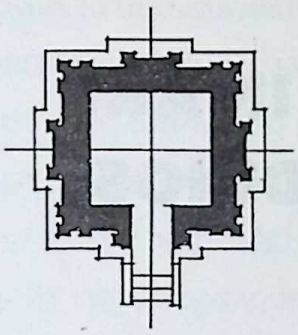
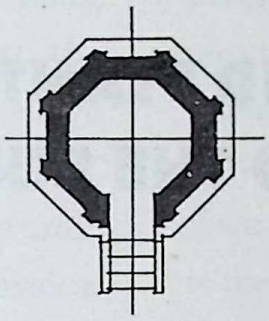
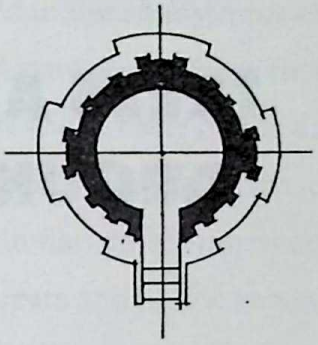
TEMPLE LAYOUTS - ARCHETYPAL FORMS



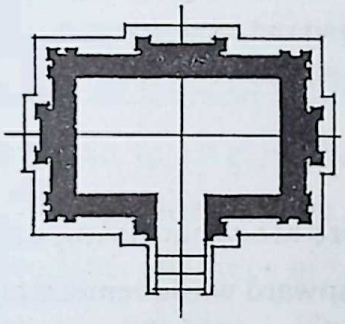
Chaturasra
(Square)



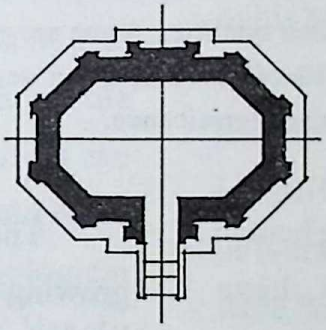
Ashtāsra
(Octagonal)



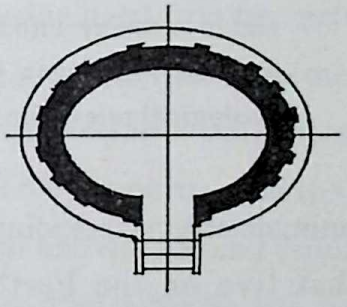
Vritta
(Circular)



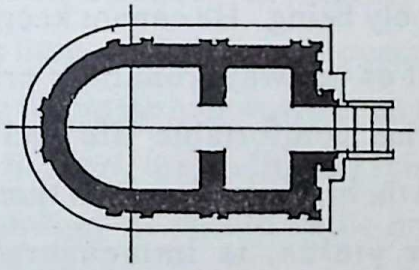
Āyatāsra
(Rectangular)



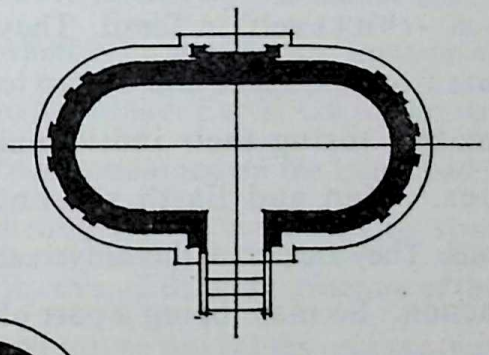
Āyata Ashtāsra
(Recta-octogonal)



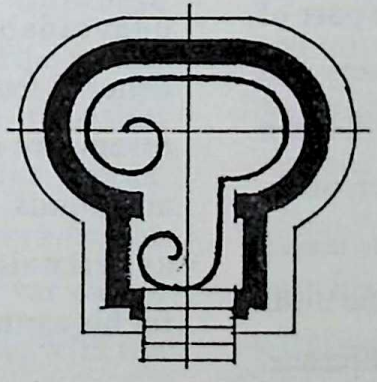
Ayata Vritta
(Elliptical)



Hasti Prishta
(Apsidal)



Dwayasra Vrita
(Recta-circular)



Prana Vākāra
(Om Kāra)

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29

TREES AND PLANTS IN AND AROUND THE BUILDINGS

Human beings have to live in the company of natural vegetation and in harmony with their qualities. Some are good and some others are bad for human life. Choice of good vegetation is of great ecological relevance and significance.

All animate objects including human beings, that live on the Earth, have a common source of origination called 'SPACE' in English, 'AKASA' in Sanskrit and விண் வெளி (Vin veli) and ஒளி வெளி - ([1]OLLI veli) in Tamil. They germinate from the space and return to it, ultimately losing their individual identities. Man and Earth are not exceptions. They are part of this universal phenomenon. So man, being a part of gross nature, has to live in company and in harmony with all of them, as if his own kith and kin and near and dear ones. Under the same circumstances, man's association with certain animals and birds is inevitable and of ecological significance.

There are other living organisms, growing upward while remaining fixed to the ground, such as trees, plants and shrubs, with which man and other animates are surrounded. So man is not a lonely being. He cannot keep himself aloof or be away from their proximity. For his comfortable life and healthy growth, his dependence on them and on their yields, is immeasurable and unavoidable. He derives enormous benefits from them. Added to that, large reservoirs of water such as lakes, tanks and ponds, as also rivers and seas serve as perennial source of food and energy for his earthly existence. Further, forests,

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[1] See chapter on Selection of building site for the adoption of this kind of spelling.

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hills and valleys also exert enormous influence on his life. Apart from these, he has to adjust to the seasonal variations, and inclement weathers as also the influence of Sun, Moon and Planets on him, and that of light and sound. In short, all objects of nature both subtle and gross are all directly connected to his physical existence and prosperity on Earth.

The shilpi-rishis of yore have studied the qualities of such gross nature, their positive and negative impacts on human life and carved a natural habitat on the Earth, for man to live in, just as we re-create habitats for animals and birds as also for plants and trees in zoological and botanical gardens. The Vaastu shastras, while providing facilities for physical comforts of man in such habitats, have gone further deep, in that they aim at linking human life with subtle energies prevailing within the built environment and outside. In short, the traditional science and technology of Vaastu Vedic origin create a kind of micro universe on the Earth, after the pattern of the macro, with all the physical and spiritual properties packed into it. In other words, man was free, healthy and wise when he was part of nature. Infact, he was nature himself. He was free to vibrate with the vast space and live in peace and bliss. Our great Maharishis of yore lived in caves and under shady trees or under tiny huts in Aranyakas, where they were able to realize the secrets of the universe and universal self and establish an equation. Even Brahmarishi Mayan lived all the time in the forests and hence he was addressed in Villi Bharatam as காணுறை மயன் Kanurai Mayan meaning 'Mayan who lived all the time in forests'. As a result of his having lived with free nature he was able to give us the supreme treasure 'Pranava Vedam' which, today, is identified by experts to be the source of universal knowledge and culture. Vedas were born thus in the forests, not in cities and towns. Man today soars high in the space, not to understand the subtle nature but to identify gross nature and find out whether he would come upon an alternate to the planet Earth. On the contrary our rishis remained on the Earth and let their minds travel beyond the space and discovered the very structure of the macro and micro universes and recreated one on the Earth for their material and spiritual welfare. All sorts of trouble came, the minute man got himself isolated from outside environment and confined himself within a four walled structure called

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building. Hence the Shilpi rishi Mayan recreated the same environment and called it a miniature universe சிற்றவை (Sitravai) and put him there, so that he may vibrate with the space and the ecological environment created around the built space and enjoy the coveted spiritual peace and wellbeing. Where is the model for the human beings to realize this spiritual peace and recreate their own? **This model exists in the micro-abode or Chitrambalam popularly known as Chidambaram of South India that the Indian science has blessed the human kind with. The impact of subtle space on human psyche is the most important of all effects of nature on human existence. It is in this aspect that the Vaastu science stands unique and supreme and hence not to be ignored. They are not superstitious.**

Hence, here and now, in the first instance, let us look at the green vegetation that grow on the Earth and their impact on human life as per shastras and local traditions.

In the southern tradition, against the backdrop of local climatic conditions, specific mention has been made in the shastras about the species of trees and plants to be grown around the dwelling places. If they are found to exist already on the building plot, there are certain modes of disposals or adjustments in the positioning of the main building just to ward off harmful effects. The following are the trees, not desirable in the context of a habitational space. It should not be forgotten that these trees and plants are useful in different contexts, though negatived in the present context of having them near about human dwellings.

Agathi — அகத்தி
Palmyra (Palm) — பனை
Jamboo (Jambolana) — நாவல்
Eichi — இச்சி
Tamarind — புளி
Silk-Cotton — இலவு
Amla — நெல்லி
Cotton Plant — பருத்தி
Banyan — ஆல்
Peepal — அரசு
Mahilam — மகிழம்
Wood apple — விளாம்
Udumbara (Country-figtree) — அத்தி
Elandai (Bhirtree) — இலந்தை
Purasu (Portia) — புரசு
Erukku — எருக்கு

In another text, the following plants and trees are permitted to be grown

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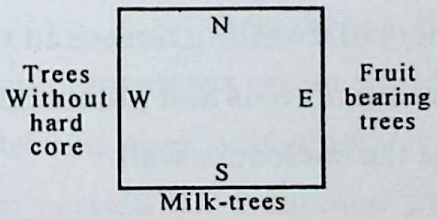
around the residential areas.

Tengu	—	தெங்கு
Phanasa (Jack)	—	பலா
Plantain	—	வாழை
Kamugu	—	கமுகு
Pommegranade	—	மாதுளை
Grapes	—	திராட்சை
Neem	—	வேம்பு
Lime	—	எலுமிச்சை
Mullai	—	முல்லை
Dathu Mathulai	—	தாது மாதுளை
Malligai	—	மல்லிகை
Tulasi	—	துளசி
Kondrai	—	கொன்றை
Pavala Malligai	—	பவளமல்லிகை
Mango	—	மா
Narthai	—	நாரத்தை
Panneer (Flower tree)	—	பன்னீர் மரம்

The traditional sentiment has been to avoid existence of Banyan, Peepal, Tamarind and Udumbara (அத்தி) trees



Places for trees around a house

near residential areas. At the same time certain exceptions are also noticed in the texts and in actual practice. Milk trees like udumbara are allowed on the south, fruit bearing trees on the east, and trees with water content and of nissara type(trees without hard core) on the west.

Certain other shastras attribute harmful effects in the case of milk trees (causes economic poverty) plantain trees (fear from enemies) and fruit yielding trees (harmful effects on human system). Such trees, if they need to be planted should be away by at least 100 feet. Their roots, in general, are not good for health.

There are other shastras that prescribe certain other specific locations for the trees that would be harmful if they are found or if they are to be planted close to the dwelling spaces. According to them, Athi (milk tree - udumbara) and Kondrai on the east, thorny plants on the south, plantain on the west and fruit bearing trees on the north are permitted.

The generality of Vastu Vedins outrightly reject the existence or planting of the following trees in view of certain harmful effects that they would cause on human life.

Cotton plant	—	பருத்தி
Agaththi	—	அகத்தி
Palmyra	—	பனை

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Jambu — நாவல்
Amlaka — நெல்லி
Etti — எட்டி
Erucku — எருக்கு
Murukku — முருக்கு
Tamarind — புளி
Amanakku — ஆமணக்கு
Banyan — ஆல்
Peepal — அரசு
Udumbara — அத்தி

Another shastra called Vaastu Vidya classifies the vegetal kind into the categories, one as trees with hard core inside and the other as trees with hard core outside. They are respectively designated as 'Antassara Vrukshas' and 'Bahissara Vrukshas'. The recommendation in this context is that the 'antassara' may be planted inside the enclosure and the bahissara on the outside but the mixed can be planted anywhere. This is, of course, a general classification, since specific instances are found in other shastras as to what to have near and what to be kept away from. The architects have to be very careful in making a choice out of these categories.

There are trees and plants that secrete either milky juice or oily juice when scratched by nail or with an instrument. The former is called 'female' trees (ஆண் / पुरुष) and the latter 'male' trees (பெண் / स्त्री). There are trees that do not yield either, not even water, remaining dry or pithy. These are said to be neuter trees (அலி / नपुंशक). The neuter trees do not yield either flower or fruits with no scope for progeny. The neuter ones have to be identified and rejected at all costs. A thorny milk plant called kalli (கள்ளி) and another of the same character called Erukku (எருக்கு) are to be avoided.

These trees are admissible in the case of larger complexes but not into smaller ones. Added to that, the gowth of 'darba grass', 'munja grass' and 'arukampul' (அருகம்புல்) - a species of tender grass- is also another indication for healthy ground.

Under the circumstances, there are certain points to be noted carefully by designers of dwelling houses in respect of planting of trees and plants inside or outside the enclosure wall.

The following trees, in general, are allowed to exist near habitational spaces.

Bilva — வில்வம்
Neem (Margosa) — வேம்பு

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Marukkarai — மருக்காரை
Saptaparnaka — ஏழிலைப்பாலை
Mango — மா
Nochil — நொச்சில்

Trees such as banyan (ஆல்), peepal (அரசு) and fig trees known as Athi and Eithi (அத்தி, இத்தி) as we have already seen, are stated as undesirables so far as they exist close to the dwelling houses. But these are, in the context of a temple complex, held to be sacred. The twigs of those trees are used as 'samits' in the yagnaas. Trees such as banyan and peepal with their wide spread branches, offer shelter or shade for travellers and pedestrains. In the religious field, the banyan and peepal are held as 'Jnana vrikshas', 'trees of knowledge' as the former being associated with Shiva in the aspect of Dakshinamoorthy . In fact, as we have already seen, they are acceptable in one sense, provided they naturally grow away from the residential plots. However, certain precautions are suggested in the shastras as they are generally said to cause certain physical and psychical disturbances.

Again, with regard to their occurrences in nature, a few points are worthy of note here, as per textual comments. The 'peepal' should not be on the east, 'banyan' on the west, 'athi' on the north and 'eithi' on the south. The negative effects that they would cause on the human system and to the locality as a whole, are also specified in the shastras.

Similar divergent views in respect of such physical properties of vegetation are also noticeable in the basic Vaastu texts in Sanskrit as well as in Tamil-the peepal (அரசு) on the southern side, eithi (இத்தி) on the east, banyan (ஆல்) on the west, and athi (அத்தி) on the north are prohibited as per another shastra. If planted contrary to shastraic injunctions, the consequences are also stated to be alarming and hence to be avoided. The peepal (அரசு) would cause fire havocs, eithi (இத்தி) would induce criminal mindedness, and banyan (ஆல்) would bring in damage to property with weapons. Athi (அத்தி) would cause stomach disorder.

In another text, by a Maharshi called Garga, peepal (அரசு) tree would cause panic in the locality, banyan (ஆல்) political commotion and athi (அத்தி) eye diseases. What is found to be common,

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after so much of discussion is, that these trees are no good around the habitational areas.

There are trees that may be planted or allowed to exist in the proximity of dwelling areas, by another shastra, such as jack tree (பலா) on the east, (as also punnai) pakku (பாக்கு) on the south, coconut (தென்னை) on the west and punnai (புன்னை) on the north. Tamarind on the south and punnai on the west are suggested as admissibles by another shastra. Tamarind, according to southern tradition, is prohibited near about dwelling spaces since they would cause 'ushnaroga' in the human body leading to eye-troubles. Palmyra tree is not allowed near houses. Similarly silk cotton trees (இலவமரம்) and Konnai (கொன்னை) are discarded.

Sala (teak wood) trees, khadira (கருங்காலி), eluppai (இலுப்பை) and marudu (மருது) are to be grown only in forest areas or on road sides. Wild existence is essential for their free growth.

Poovarasu (பூவரசு portia), pala (பலா Jack), karu marudu (கருமருது) and pillai marudu (பிள்ளை மருது) that are used for doors and furniture are to be grown outside the living areas, so as to enable them to have free growth.

In another shastra, the trees called badari (பதரி), kadali (கதளி), dadimi (தாடிமீ), beeja purika (மாதுளை, pomagranade) should not be grown within the enclosure of the dwelling house. The house, surrounded by those trees, will not develop if allowed to grow near by, says the shastra. But Koyya (கொய்யா gouva) is allowed.

The trees such as amla and jambu (நெல்லி, நாவல்) that grow or are grown on the banks of drinking water sources like lake, pond and tank would ward off impurities in water and keep it clean and fit for drinking.

Trees on which insects (பூச்சி), worms (புழு), honey bees (தேனீ), bumble bee (வண்டு), owls (ஆந்தை), serpents rest and multiply should be avoided. Trees wherein reptiles like saarai-snakes live or wander about, should be avoided.

Casuarina (சவுக்கு) is harmless though prohibited near dwelling houses. Lemon and 'naarthai' of citrous group are allowed on the inside of the house-plot.

Sweet smelling flower-plants like jasmine (மல்லி), mullai, red lotus, blue lotus as also tulsi, fragrant shrubs and

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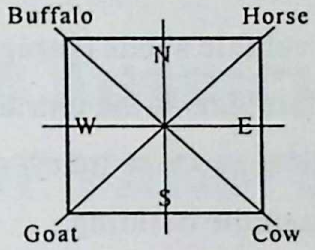
creepers with medicinal property are admissible inside the plot. Flower plants like Tulukka - samanti (துலுக்க சாமந்தி), Erukku (எருக்கு) are strictly disallowed. Semparathai (செம்பரத்தை), Arali (அரளி) of white, red and yellow shades and Nandya Vattai (நந்தியா வட்டை - water solder) are flower plants, fit to be grown only in a temple garden.

Animals and birds also add to the ecological importance of the built environment. Among the animals, the cows and calves as well as bulls are of great necessity for obvious reasons. Similarly the buffaloes and goats are also important for human life. The services of bulls and horses as vehicles are well known. Elephants serve as 'heavy duty cranes', to carry logs of wood from the forests. Of all the birds, the cock and hen are important so also the doves. Parrot and peacocks are lovely birds and there will be no harm if kept in the house or garden. Deer and rabbit are equally admissible in view of their tenderness and beauty.

Dogs are friends of man in too many ways. In the first instance they are effective 'watch' over the house and



human belongings, in addition to their being loyal to their master. They are endowed with a high sense of deductivity. They all come under the category of domestic animals and birds.

So in the Vaastu Shastras, specific spaces in and around the house-plot are allotted to keep them close to human habitat providing congenial atmosphere for their welfare. The following spaces are quoted as recommended in Mayamata and Manasara.

Cow shed	—	South East
Goat shed	—	South West
Buffalo shed	—	North West
Horse & Elephant shed	—	North East

[1]अपिच शिखिनि गोष्टं नैर्ऋतेऽजाविकानां
पवनदिशि निवासं माहिषं चैशकोणे
भवति तुरग शाला नागशाला च तस्मिन् ॥

'apicha, sikhini goshtam nairite
ajavikaanaam
pavana disinivaasam maahisham

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1 Mayamata. Since Mayamata and Manasara are authentic Vaastu Shastras, any one authority may be conveniently followed.

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chaisakone
bhavati turagasaalaa naaga
saalaa cha tasmin'. **(Mayamata)**

The vehicle sheds (garage) should be on the left side of the entrance of the house-building, irrespective of the orientation of the building.

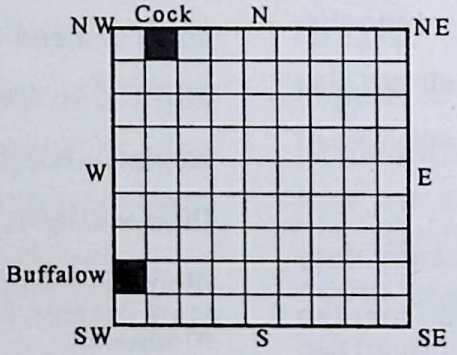
दिशिच दिशिच सर्वे वाहना द्वारवामे
'disicha disicha sarve vahana
dwara vame'. **(Mayamata)**

Manasara Vaastu Shastra is more detailed in respect of assigning specific padas for animals and other animates close to human habitational area as noted below.

Cocks and hens — in Roga Pada

Buffaloes — in Dowvarika and Sugriva Padas.

[1]**रोगस्यच पदेचैव कुक्कुटावास योग्यकम्**
दौवारिके च सुग्रीवे मेषवासंच कारयेत्
'rogasya cha pade chaiva
kukkutaa vaasa yogyakam
douvaarike cha sugrive mesha
vasamcha kaarayet'.



1 Manasara - under chapter गृहमानस्थान विधान sloka 38. Roga pada is on the western side and 2nd pada from North west; Douvarika and Sugreeva padas are on the western side and 2nd and 3rd pada from South west corner.

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THE ABSOLUTE, PURE AND AUSPICIOUS COSMICAL PERIODS OF VAASTU

Time, according to Mayan, is the equivalent term for the Primal Existence or Supreme Brahman or Supreme Space. Time is co-eval and co-extensive with space. It is not a non-existent factor as conceived by some philosophers of India and abroad. When the Absolute Pure Principle called Brahman is involved in cosmic functions, it significantly becomes known as Time (Kalam). In Mayonic science, Time is conceived in terms of cosmic events, constructions and structures. But this does not mean that in the absence of any event or structure, there does not exist Time. Even the absence of structure and non-occurrence of event have certain duration. For example, let us suppose that after the dissolution of all cosmic layers and spheroids, nothing happens and the Primal Brahman simply exists within His own frame. Then the question arises: "For how long does He exists like this?". The answer may be, hundred or thousand divine years. This means that the 'absence of event and structure lasts for one hundred or thousand divine years. So even during the period of non-occurrence of event, there is the definitive role of Time. Even non-occurrence is an event, if analysed logically.

Time has got with it inexhaustible, ever lasting and even a new existential potentiality. In view of such nature, the whole structure of universe, spheroids, multi-layers of existence, thousands and thousands of worlds and stars and all the events associated with them are conceived to have been interwoven and embedded in what is known as Time-pillar (Kala-stambha), the scientific and spiritual significance of which has not been rightly

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understood by the modern researchers of the Rig Veda and the Atharva Veda which extoll this Kala Stambha.

Mayan frequently establishes the truth that Time is synonymous with Absolute Brahman. This means that all the manifestations of Brahman, the manifestations that cover the entire range of things and existents bearing name and form are indeed the manifestations of Time Brahman. All the features and characteristics of Brahman are equally and reasonably applicable to Time also. In the Agamic scriptures, the Absolute Brahman is conceived in five different modes - mantro brahman, kriya brahman, tattva brahman, bija brahman and mukha brahman. Similarly, in Mayonic science, Time (Kala Brahman) is conceived in five different modes.

In Aintiram, Mayan states:

"Kannimai vinnimai mannimai ennimai pannimai aintum kalak kure"(13)

கண்ணிமை விண்ணிமை மண்ணிமை
எண்ணிமை
பண்ணிமை ஐந்தும் காலக் கூறே. (13)

Meaning:-

Kannimai = Time related to the first creation subsequent creations/empirical creations.

Vinnimai = Time related to divine sphere.

Mannimai = Time related to empirical sphere.

Pannimai = Time related to the orderly and rhythmic movements of the planets.

Ennimai = Time related to actions creative process (enn = conceiving and creating).

All these five are the constituent parts of Time (Kaala Brahman).

Of all these five modes of Time. Kannimai, i.e Time related to creation is the Absolute one (Para kala, just like Para Brahman): All other four modes of time are relative and transient.

Absolute time presents itself in all other relative times and invigorates them and energises them. Absolute time which is indivisible and indestructible, encompasses all other times which are subject to multi-divisions. Even though it presents itself in the multi-divisions of relative times, it is not affected by the transient and divisible nature of the relative times. The impenetrability and indivisibility of the absolute time is spoken of by Mayan as "Kalat-tinmai" (காலத் திண்மை) (Aintiram:203)

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All these points are to be kept in mind while understanding the absolute nature of Vastu-periods which occur eight times in the course of an empirical-solar year.

The occurrence of Vaastu Periods:

1. ***In the month of Citra/Mesha***:
   10th day - between 8a.m. to 9.30a.m. ordained auspicious time for the commencement of the constructional work - 9.12a.m. to 9.30a.m.

2. ***In the month of Vaikasi/Rshabha***:
   21st day - between 9.12a.m. to 10.42a.m. - recommended time for commencement 10.24 to 10.42a.m.

3. ***In the month of Adi/Kataka***:
   11th day - between 6.48a.m. to 8.18a.m. recommended time for commencement 8a.m. to 8.18a.m.

4. ***In the month of Avani/Simha***:
   6th day - between 2.24p.m. to 3.54p.m. - recommended time 3.36 to 3.54p.m.

5. ***In the month of Aippasi/Tula***:
   11th day - between 6.48a.m. to 8.18a.m.- recommended time 8 to 8.18a.m.

6. ***In the month of Kartika/Vrschika***:
   8th day - between 10a.m. to 11.30a.m. - recommended time 11.12 to 11.30a.m.

7. ***In the month of Tai/Makara***:
   12th day - between 9.12a.m. to 10.42a.m. - recommended time 10.24 to 10.42a.m.

8. ***In the month of Masi/Kumbhaa***:
   22nd day - between 9.12a.m. to 10.42a.m. - recommended time 10.24 to 10.42a.m.

(The corresponding dates and times should be known through calenders or panchanga. These dates and times remain constant).

These eight periods are considered to be the most auspicious time on which Vaastu Purusha/Maha Purusha/Kala Purusha keeps His eyes open. Further it is believed that in this duration of 1½ hours, he gets up, takes bath, puts on fresh attire, eats and chews the betel leaf with all the essential fragrant ingredients (tambula). It is instructed that the constructional work should be commenced during the last phase of this period, especially the time at which he is chewing the betel-leaf combination. (The

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duration of this period is divided into five parts; first four parts for bathing etc. the fifth part, lasting for 12 minutes is the exact time for taking the betel-leaf combination). The work thus begun would be completed without any impediment and constructed building will yield prosperity, wealth, longevity etc.

The opening of eye and other activities undertaken by Vaastu Purusha are to be understood against the principles set forth in Mayan's Aintiram (ஐந்திறம்) and Sirpamac-Chennul (சிற்பமாச் செந்நூல்).

The Vaastu period occurring eight times in a year with an orderly intermission belongs to the Absolute time, called Kannimai (கண்ணிமை) by Mayan. Being the Absolute time it is not affected or influenced by the merits or demerits of the week-day or lunar day or langhna, hora, asterim etc. Neither is it affected by such periods as rahu-kala or yama ghanta.

Let us suppose that the 10th day of Citra month (approximately 23rd April) occurs on Saturday. Vaastu period for this day is between 8 and 9.30a.m. and the proposed construction should be begun between 9.12 and 9.30a.m. But actually, this period, on Saturday, synchronises with rahu-kala. Normally, nobody would select Saturday and added with that rahu-kala to commence the constructional work.

Now what Mayan emphasises is that, without any hesitation and doubt, one should be prepared to start the constructional work in that ordained and auspicious period of Vaastu; since this period is absolutely pure and auspicious, being not affected by the features of Saturday and Rahu-kala. This period belongs to the impenatrable and indivisible Absolute time called Kala-mapporul (காலமாப் பொருள்). This period belongs to Kalat-tinmai (காலத்திண்மை). Time associated with impassability and impenetrability.

This Vaastu period, which is absolute, most pure and auspicious may occur on any one of the week-days or lunar days; may occur on one of the asterims not fit for constructional work. But Vaastu period remains unaffected and untouched by the negative or positive features of the week-days etc. Other auspicious days expect the co-occurrence and synchronization of beneficial laghna, star, lunar day, vaara and so forth. But the absolute Vaastu-Period does not

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expect such co-occurrence and synchronization. It is unique and all-auspicious (sarva mangala). It is like the swift current of water running beneath the river being unaffected by the peripheral waters. It is like the pure water currents which course through the interior of the oceans without being affected by the salty waters. It is not something which possesses purity. It is the purity itself; it is the auspiciousness itself. Now, let us understand the significance of the actions of Vaastu Purusha.

"Vaastu Purusha opens his eyes". What is the exact meaning of this statement?

Vaastu Purusha is not different from Kaala Purusha. Mayan calls Him "Kalamap-porul" (காலமாப் பொருள் Time, the great existential Brahman). He is not a demoniacal being or goblin, as considered even now by the pseudo vaastu-writers, art-historians, astrologists and by the common people. He is the Great Purusha, extolled and adored in the mantra:

''ऋतँ सत्यं परम् ब्रह्म पुरुषं कृष्णपिङ्गलम्
ऊर्ध्वरेतं विरुपाक्षं विश्वरूपाय वै नमः ''

"rtam satyam param bramha purusam krsna pingalam uurdhva reetam viruupaksam visvaruupaaya vai namah".

"Salutations to Him, who is the cosmic order, enduring existence who is the Supreme Brahman who pervades all and protects all, who is blue-black and gold in colour, who is the creative vitality that flows upwards whose eye is with significant form (shape) and who manifests himself as the entire range of forms and worlds".

When it is said that Vaastu Purusha or Kala Maha Purusha opens his eyes, what is actually meant is that the particular fraction of time is turned towards new creation or manifestation. In the sphere of Agamic science and Vaastu science 'opening of the eye' denotes the moment of new creation and 'shutting of the eye' denotes the moment of complete absorption of the created things into their respective sources of origin. Between the 'opening of eye' and the 'shutting of eye' made by Kala maha purusha, thousands of aeon (Kalpas) roll by.

''उन्मेष निमिषोत्पन्न विपन्न भुवनावलिः''

"unmesa nimisotpanna vipanna bhuvanaavali".

"She is associated with series of worlds that are created and dissolved by the opening and shutting of her eyes respectively".

(Sri Lalita Sahasranamastotram)

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This is one of the thousand names of Sri Lalita Parameswari. Similarly, we have it stated in the Soundarya Lahari (55).

''निमिषोन्मेषाभ्यां प्रलयमुदयं याति जगती''

"nimesonamesabhyam pralayamudayam yati jagati".

"The world attains dissolved state and the created state by the shutting and opening your of your eyes respectively".

Same ideas are expressed in respect of Rudra-Maha Purusha in the Agamic texts. The Agamic texts make it clear that the moment for shutting the eye is the same as that for opening the eye.

In his Aintiram, Mayan states:

"Kannimai ulik-kalaiyunar kalam"(268)

கண்ணிமை ஊழிக் கலையுணர் காலம்

"The opening of eye is actually the Time which indicates the systematic cycle of manifestation; The time between the opening and shutting of eyes is the duration of an aeon"(ஊழி)

So, when it is said that Vaastu Purusha opens his eyes, what is really meant is that the cosmic vibration is set forth for new creation of myriads of things. Mayan further states:

"Kalat tutippe kalaiyunarvonga mulattelum iyal munneri vagukkum"(252)

காலத் துடிப்பே கலையுணர்வோங்க
மூலத்தெழுமியல் முன்னெறி வகுக்கும்

"The vibration (i.e. opening) of Time indicates and properly directs the process of creation that arises from the primal source."

Mayan denotes such auspicious period of Vaastu by another significant and mellifluous term: Kalaccevvi (காலச் செவ்வி). In Tamil, a pregnant lady who is just about to give birth to a child, is called "sevvi vayttaval (செவ்வி வாய்த்தவள்). Mayan says that the vastu period is kalaccevvi (காலச் செவ்வி) the auspicious time ripened for immediate fresh manifestation.

"Kalaccevvik kalainilai unarttum"(431)

''காலச் செவ்விக் கலைகிலை
உணர்த்தும்''

"The ripened and mature state of Time is indicative of the phase of fresh manifestation."

Mayan asks:

"Shall there arise such an auspicious time of creation without the presence of the Great Time Brahman?".

''காலமாப் பொருள் அன்றி
இல்லையோர் காலமாக்கலை
தோன்றுமோ?'' - (சிற்பமாச் செந்நூல் 973).

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The auspicious creative time indicated by the opening of eye pertaining to the Great and Absolute Kala Purusha and that pertaining to the Kala Purusha energising the earth are identical. This is one more deepest truth enunciated by Mayan.

"Kalamapporul kalamum kalai kanvilittelum kalamum".

''காலமாப் பொருள் காலமும் கலைக் கண்விழித்தெழும் காலமும்''
- (சிற்பமாச் செந்நூல் 992).

In other words, the macro-time has got its identical presence in micro-time. The interplay of macro time and micro time has been systematically dealt with by Mayan in his works such as Aintiram, Pranava Vedam, etc.

Then, what about such activities as bathing, dressing, eating and chewing of betel-leaf etc. as being done by Vaastu Purusha during this most auspicious creative time? They are not to be taken literally. Cosmically, these activities denote the preparatory steps for the new creation, the steps that lead to the pure and blissful state of contentment, a state of complete fulfilment, chewing the fragrant betel-leaf combination signifies the state of completeness and satiety assumed by Vaastu Purusha, the state not impaired by further need or deficiency. The state of Vaastu Purusha at this particular period is compared to a completely filled up vessel - purna kumbha. It is the vessel, not only in a filled up state but also in an inexhaustible state. Without any decrease in its inherent potentialities, it gives rise to innumerable worlds and worldly objects. It is with this significance that purna-kumbha is reverentially shown in the presence of the Main Deity installed in the main shrine.

''पूर्णः कुम्भो धिकाल आहितस्तं वै पश्यायो वहुधा न सन्तः।
स इया विश्वा भुवनानि प्रत्यङ् - काल तमाहुः परमे व्योमन्॥'' अथर्ववेद : 19:53:3

"In this Time, which is like purna-kumbha, are deposited the sources and seeds of all the worlds and of enjoyments. We, the good ones on this Earth perceive Him in various ways. He brings to light all these worlds. The seers call Him Kaala, who pervades even the supreme space".

Vaastu Purusha or Kaala Brahman is evidently like purna-kumbha, this state being indicated by the last phase of the Vaastu period.

Even in the Atharva Veda, we have reference to the Kaala Purusha's opening of the eye and seeing through the eye.

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''काले चक्षुर्विपश्यति''

"Kaale caksurvi pasyati".

"He sees with his open-eyes during the particular auspicious time."

- Atharva Veda:19:53:5

Mayan extolls the unparallelled excellence of Time:

"But for the presence of the Great Time Brahman will there arise an auspicious time?".

The Atharva Veda declares in the same tune:

''तस्यात् वै नान्यत् परमस्ति तेजः'' (19:53:4)

"No other luminous energy is greater than Kaala".

The wonders of Kala are inconceivable and indescribable. It is emphatically stated that Mayan excels all other Rishis by conceiving and excels describing the wonder-workings of Kaala Maha Purusha and providing for them an inimitable mathematical order.

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VAASTU PUJA and VAASTU HOMA

Etymologically, puja means an act of fulfilment resulting in unification. Generally we call it worship. But the term **'worship'** does not carry with it the exact sense and significance of puja. The worship should be performed in such a perfect way as to realise or gain a deep sense of identity with the worshipped. All the overt and external activities concerned with puja should be oriented and executed to establish such an identity. An action which does not subscribe to such feeling or realisation of identity descends to the level of supersitition and perfunctory deed.

It is enjoined in the **Agamas** and **Vaastu Sastras** that once a proper ground is selected for construction, the owner should purify the ground and perform **Vaastu Puja** and **Vaastu homa**. The purification of the ground, puja and homa are meant to arouse the energies that are lying dormant and insipid within the select-area of the ground. For the purpose of arousing the cosmic forces and setting these forces in their respective momentum and function, these activities have been enjoined.

At the outset, we have to mark the exact boundary of the proposed built-area, the boundary being arrived at according to **ayadi-calculation**. An area specified and defined by the exact boundary, becomes a miniature universe. Though that particular area is a tiny part of the vast and extensive universe, it becomes a perfect unit of wholeness associated with all the properties of the cosmic structure. So the bordered built-area assumes the form of 'little universe'

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and it becomes identical with **Vaastu Purusha Mandala** which, according to Vaastu Science is the exact lay-out of the cosmic structure. Against this background, we have to conceive the **Vaastu Purusha Mandala** within the boundary. Once this is properly conceived, the central area of the built space becomes the **Brahma-sthana** and the surrounding grids become the locii for the respective function of the cosmic forces. Vaastu puja and Vaastu homa are to be performed in the north-east quadrant of the marked area.

In addition to the necessary paraphernalia such as flowers, vessels, lamp, rice, ghee and other things, what is essentially needed is the **Vaastu Purusha Mandala**, designed with coloured rice and sesmae seeds.

In the process of puja, even the lines of the mandala are conceived in terms of 'saktis' or cosmic energies. In the **Manduka Vaastu Mandala**, the names of the north-south lines, starting from east are: **Lakshmi, Yasovati, Kantha, Suprita, Vimala, Siva, Subhaga, Sumati and Saara.**

The name of the east-west lines, starting from the south are: **Dhanya, Prana, Visala, Sthira, Bhadra, Jaya, Rajaa, Vibhava** and **Chetana.**

Similarly, in the **Paramasayika Vaastu Mandala**, the names of the north-south lines starting from the east are: **Santi, Yasovati, Kanta, Visala, Pranavahini, Sati, Sumana, Ananta, Subhadra** and **Manorama.**

The names of the east-west lines, starting from the south are: **Durjaya** and **Durdhara**. The names of the sub-diagonals, known as Kilas are: **Kilini, Padmini, Suvrata, Nivruttaka, Sadbhava, Rajani, Vakshini** and **Yakshini.**

These names should not be considered as the fabricated ones born of fancieds vision and views. These are as much true as the scientific names of the inner structures of an atom. Besides functioning as **'mantras'**, these names draw our heart and mind to the closest viscinity of the cosmic Lord - the Great Time God (காலமாக் கடவுள்) as Mayan calls Him.

All the pada-devatas, (53 in number, from Vaastu Brahman at the centre upto Palipincha on the north-peripheral) are

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invoked with their respective forms and colour and worshipped.

Another aspect of Vaastu based sacred action is **homa** which means the energising of the cosmic forces with substances that are considered to be the essence of creative phases of the cosmos. This **homa** consists of two important events;

1) Kindling of cosmic-fire based on the principles of systematic manifestation of worlds and worldly forms and objects.

2) Offering of the essential and essence-substances such as ghee, fruits, seeds, roots, creepers and so forth into the enkindled fire, thereby energising the entire ground selected for building purpose. All the activities related to the enkindled fire are linked with the **Vaastu Purusha Mandala**. An invigorative correspondence is effected between the enkindled fire and the mandala, through a proper media.

This, in short, is the significance of **Vaastu Puja** and **Vaastu Homa**.

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32

BUILDING DESIGNS

BASED ON VAASTU PRINCIPLES

A brief account is offered, of the process of architectural compositions, where one would find the principles of resonance dominating the entire process of form figuration - A brief account of the determination of the elevational details is also provided for students of architecture and professional designers - Examples are limited - Practice under a traditional master, to get mastery over the aesthetical aspect of the exterior is advised.

HEIGHTS OF BUILDINGS

The design of a building has to be done in an orderly manner with much focus on the plan , as the plan is the basic two dimensional concept that transforms into a three dimensional block encompassing the vibrant energy that helps in the sustenance of the dwellers. Two dimensional plan is elevated to a derived height depending upon the number of floors. As already mentioned earlier a building is said to be a living organism if it builds the 3 factors of Ramyam, Bhogam and Sukhadarsham. The aspect of Sukhadarsham or the pleasing appearance is the factor that is dealt with in this chapter.

The buildings whose layouts are pretty need not be beautiful from the exterior is a modern concept. This need not be true since the application of Vaastu in totality will provide a pleasing and elegant look on the point of view of the layout as well as the facade. The above statement may sound absurd, but this is a reality because the design of elevation of a building is given as much importance as

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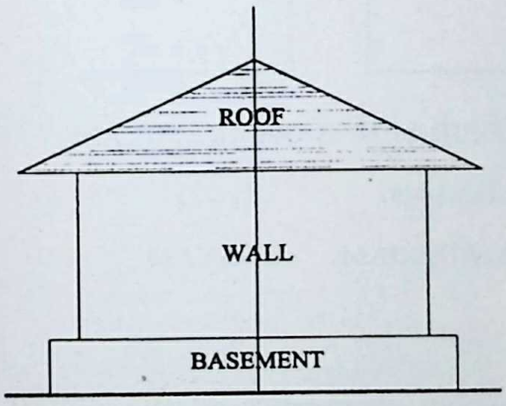
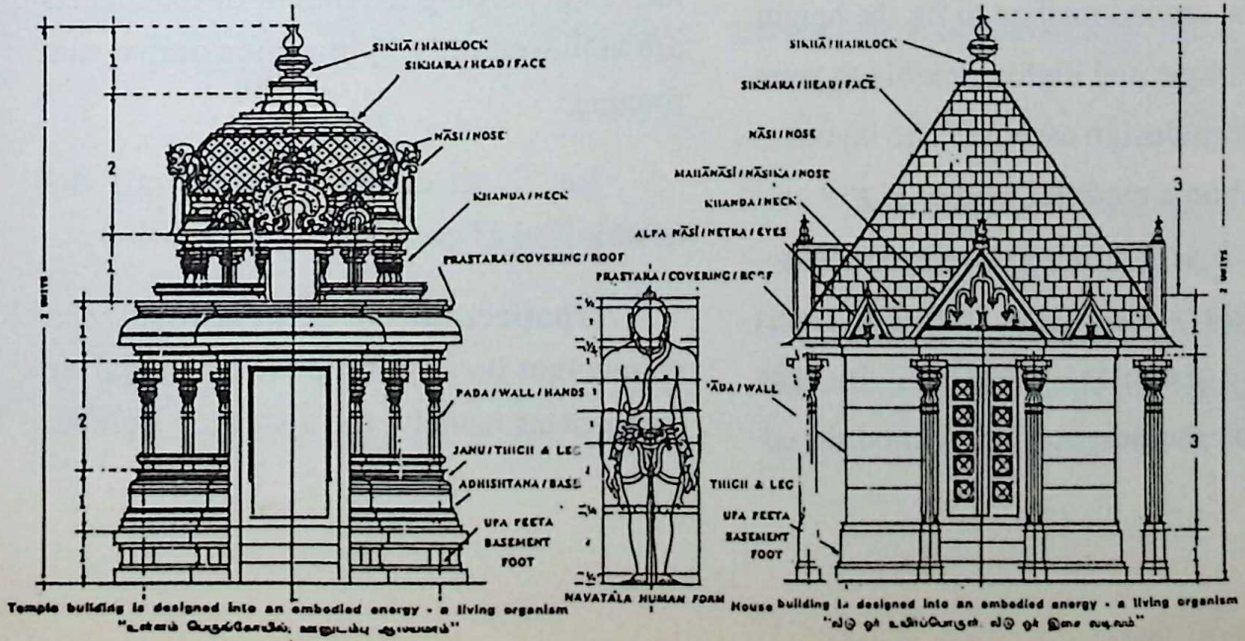
the design of the building layout itself. Every structure erected on the earth should resonate with the nature for which sacred measures are applied for designs. A building is composed of various parts or angaas namely,

1. Upapeetam - Basement
2. Adishtanam - Base
3. Paadam - Walls or Pillars
4. Prastaram - Roof
5. Greevam - Dado
6. Shikaram - Head
7. Stupi - Tuft



The erection of a building using the main 4 angaas of Adishtanam, Paadam, Prastaram and Shikaram is called a "Chaturanga Vimanam". The detail and design of each anga is dealt with elaborately in the latter part of this chapter. The incorporation of these measurements does not stop with the plans alone but is extended in the creation of the elevational elements also. The vertical elements for a building can be classified broadly into 3 segments namely, Basement, Wall & Roof. These are the primal elements that compose a building space.

A building is a living organism that functions similar to the human being. This is a statement expressed at subtle level. When we consider the same theme at a gross aspect, the parts that combine to form a single stable human body can be



Temple building is designed into an embodied energy - a living organism
"உள்ளம் பெருங்கோயில், ஊனுடம்பு ஆலயம்"

House building is designed into an embodied energy - a living organism
"வீடு ஓர் உயிர்ப்பொருள், வீடு ஓர் இன்ப வடிவம்"

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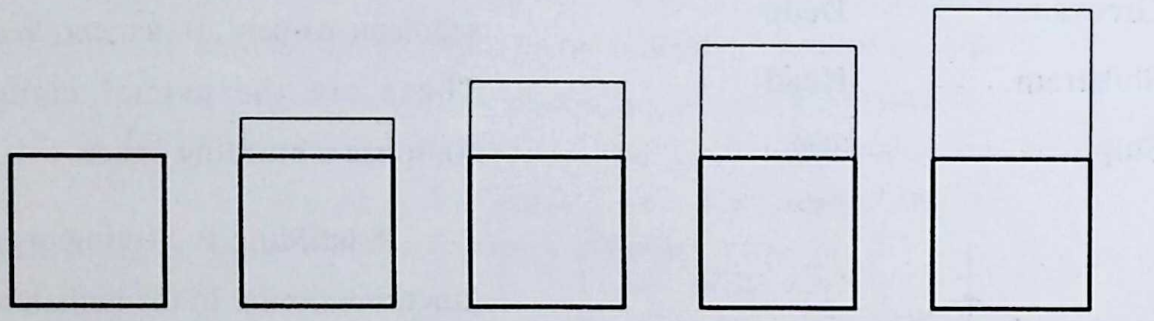
compared with the above said parts of a building. Our human body is built of several parts from head to foot which are proportionately arranged one above the other. Similar proportions are applied for developing the elevations of a building also. The illustration gives a clear understanding of this concept.

The height of a building can be determined by following either of the two ways explained here. Firstly, the height of the building is fixed based on its width. There are ratios that can be adopted while fixing the height with respect to the width. If 'a' is the width of the structure the height can be 'a, 1¼a, 1½a, 1¾a or 2a' and so on. The ratios are indicated below with illustrations.



SHĀNTIKAM	POUSHTIKAM	JAYADAM	ADBHUTAM	SĀRVAKĀMIKAM
(1 : 1)	(1 : 1 1/4)	(1 : 1 1/2)	(1 : 1 3/4)	(1 : 2)
SAMAM	SAPĀDAM	SAARDHAM	SATRIPĀDAM	DVAYAM

The above said proportions indicate the height that includes the stupi.

The second method to fix the height is very simple and highly flexible to suite the modern design aspects. The layout is designed on a modular grid of 9 × 9 units with each grid of a particular measure. The height of the angaas is fixed in terms of these modular measure. In this technique the heights can be modulated as per the requirements and the visual aesthetics. But the choice of height and factors governing the height of the angaas are achieved only by practice and visual training.

Let us discuss now in detail the description of each angaa.

Upapeetam - The basement, the upapeetam that is composed of smaller components namely, the upaanam, kambu,

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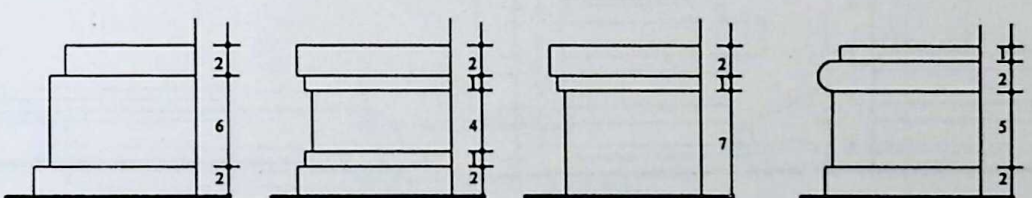
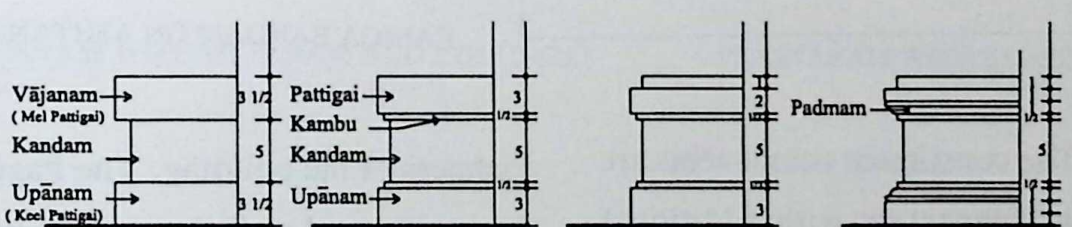
kandam and pattigai. These are termed as the constituent elements.

Kambu is the basic unit and the smallest member termed as 'kooru' or 'amsam'. The other constituent elements of Kandam, Upaanam and Pattigai are derived from the height of the Kambu. There are basically 9 types of Upapeetam of which most of them are applied for temples and a few can be incorporated in buildings. The projections, recessions and the height of each element is determined based on the 'amsam' as illustrated below. This total height of the Upapeetam is derived from the modular measure as discussed earlier. This height is divided into equal number of units and certain number of units are combined together to form the Upaanam, Kandam and Pattigai. The division of the height ranges from 12 units to 27 units. The simple designs are illustrated below.

In temples there are more complicated elements introduced that



UPAPEETAM DESIGNS SUITABLE FOR MODERN BUILDINGS



YONGA UPAPEETAM PANJANGA UPAPEETAM SEGANDA UPAPEETAM ASHTANGA UPAPEETAM

adds to the richness in ornamentation. Pattigai can be of various types as illustrated.

Adisthaanam : This forms the base of the Paada or the walls and rests upon the Upapeetam. The adisthaanam can be deleted if not required but Upapeetam is

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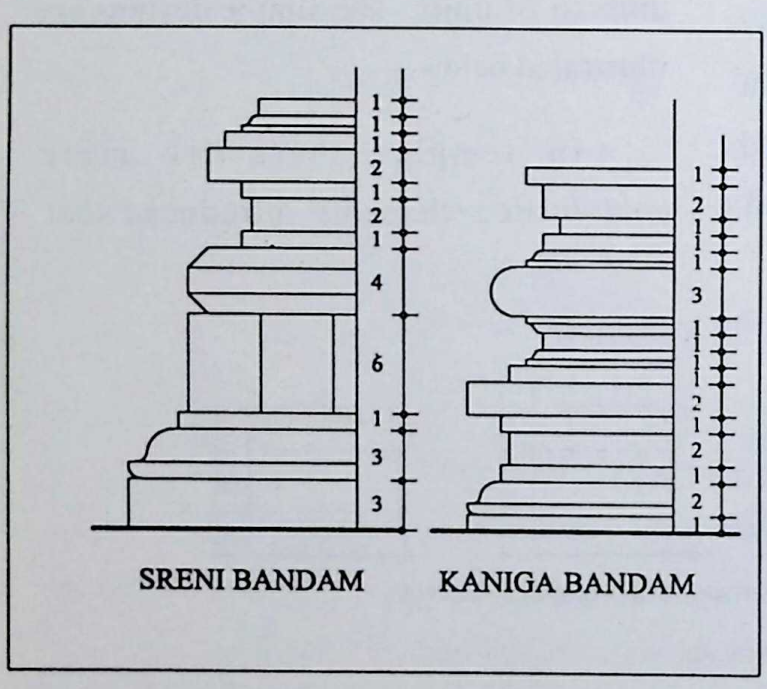
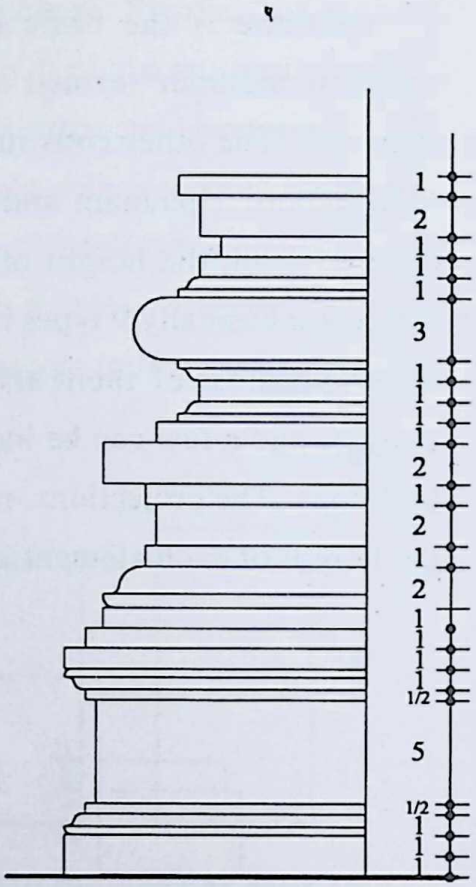
the element that has to be executed for any structure. Adisthaanam is introduced for buildings which need a raised basement to produce an elevated appearance.

There are 64 types of adisthaanam designs of which the simple less ornamental types can be used in modern designs. The constituent components are similar to Upapeetam with additional elements namely the Kumudakam, Padmam, Pattigai, Podigai and Jegadi. A few types are shown hereunder;





KANIGA BANDAM ON ASHTANGA UPAPEETAM

Paada : The walls rest upon the basement elements of Upapeetam and Adisthanam. The ornamentation on walls is a fascinating detail which adds to the richness of the building. The Paada could be an enclosed walled structure or simply a row of free standing pillars. The walls can be cladded with pilasters (Bhitti-sthambha) to enrich the appearance. The height of the pillar determines its width.

Prastaram : The Prastaram comprises of 'Uttaram' (beam) and Podigai (roof). These two put together

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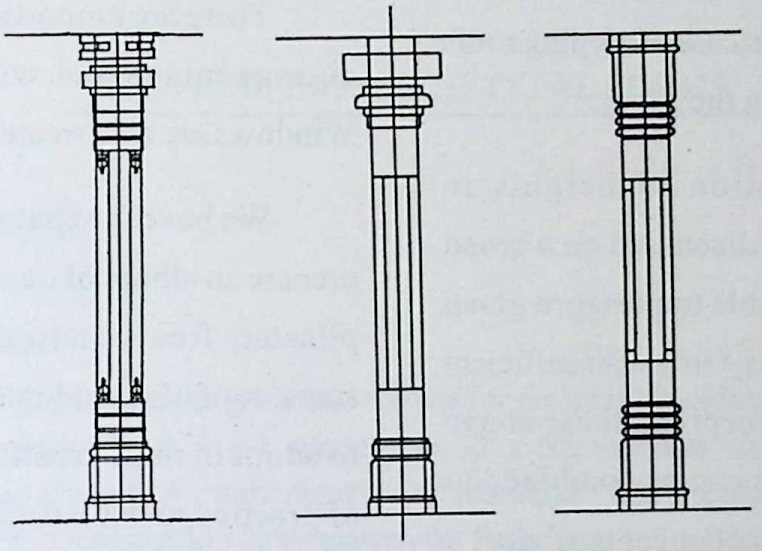
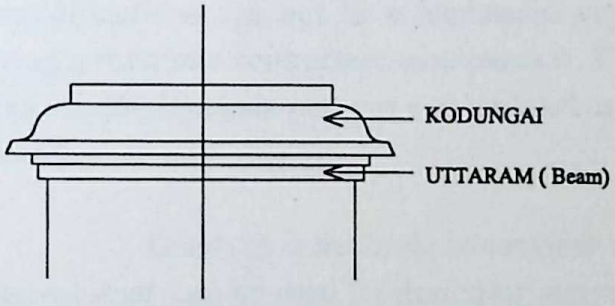
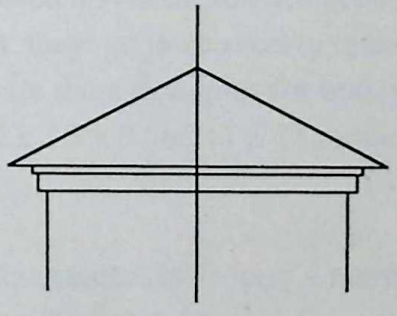


PADA DESIGNS



PRASTARAM WITH UTTARAM AND KODUNGAI



PRASTARAM WITH SLOPING ROOF

from the roof entablature of the building. This can be well noticed in the Draupathi Radam in Mamallapuram. In case of sloping roof structure, the podigai gets transformed into a sloping element which rests upon the Uttaram.

Greevam : This is the neck of the building and is treated as a dado.

Shikaram and Stupi : The Shikaram of a structure is compared to the head of a human body. There cannot be a headless human form. Thus there

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should not be any building without the Shikara and Stupi. In case of sloping roofs a Kalasa is placed in the finial.

The description of heights in buildings has been discussed on a broad aspect with reasonable importance given to the major elements. Only with sufficient visual taste and perception, these above discussed elements can be combined to give a pleasing aesthetical appearance.

There are a number of designs for readers to study pillars and pillar details.

There are proportional measures for door openings and window openings. Windows are also treated architecturally.

We have, a separate programme to prepare an album of designs of basement, pilaster, free standing pillars, chajja, steps, roof, for students of architecturel to adopt in their creations. A good deal of practice under a traditional master is also advisable to grasp the meaning and form, just like learning music under a musician.

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DEVELOPING ARCHETYPAL FORMS

In general, the grids that we use for designing buildings based on Vaastu principles range from 1 x 1 module to 32 x 32 modules. Among these more importance is given to 8 x 8 modular grid -"Manduka Pada Vaastu Purusha Mandala" and the 9 x 9 modular grid - "Paramasaayika Pada Vaastu Purusha Mandala". This in general is used for temples and residences respectively.The above stated basic grids can be extrapolated into various other patterns that can be used according to the design requirements. The illustrations shown in the next few pages will help in understanding the concept. This system of modifying the basic moulika or laangala form to achieve a functionally sound design is allowed in Vaastu science because such modifications are not in a haphazard way but they go in an orderly manner following a rhythmic contraction or expansion. There are three examples for both the moulika and the laangala patterns extrapolated using 7 x 7,9 x 9 and 11 x 11 modules illustrated.

Dandaka is the basic rectangular unit that combines to form a number of patterns that can be used for designing according to the suitability and functional requirements. The formation of Laangala, Moulika, Chaturmukha, Sarvatobhadra, Vardhamana, etc. with the interlocking of Dandakas can be well studied in Chettinad houses of Tamilnadu. In these residences, the stretch of rooms is elongated in such a way that we can see the road on the west from the eastern entrance along the central axis. The courtyards inbetween the building blocks of the Vardhamana or the Sarvatobhadra type of residence is technically termed as "Antaraalam". It is this element that provides the vital flow of energy needed for the inmates of the residence to live in peace. On the other hand this also helps in providing sufficient light and ventilation, which is the foremost requirement for buildings in tropical climate.

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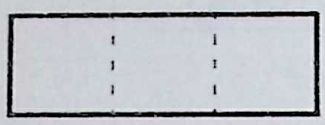
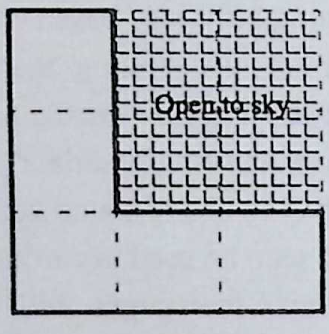
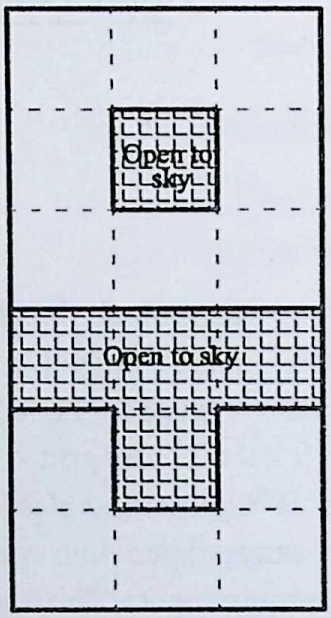
DEVELOPING ARCHETYPAL FORMS



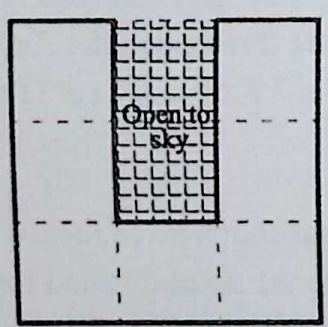
DANDAKA
(A basic rectangular unit)



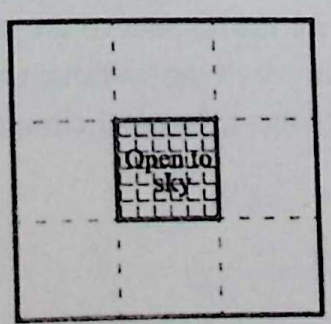
LAANGALA
(Composed of two Dandakas)



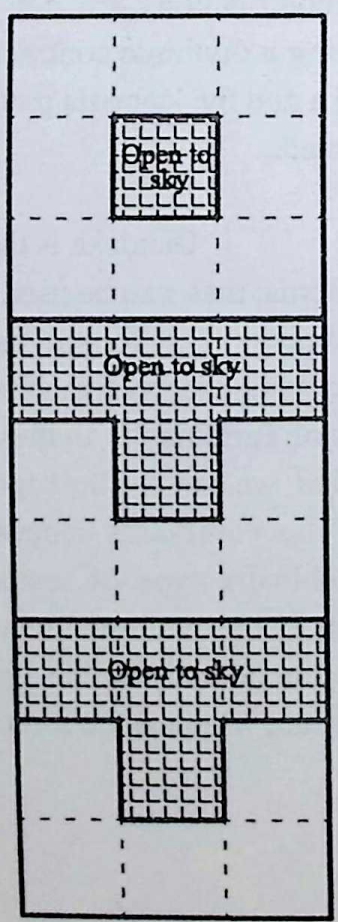
SARVATOBHADRA
(Composed of seven Dandakas)



MOULIKA
(Composed of three Dandakas)



CHATURMUKHA
(Composed of four Dandakas)



VARDHAMANA
(Composed of ten Dandakas)

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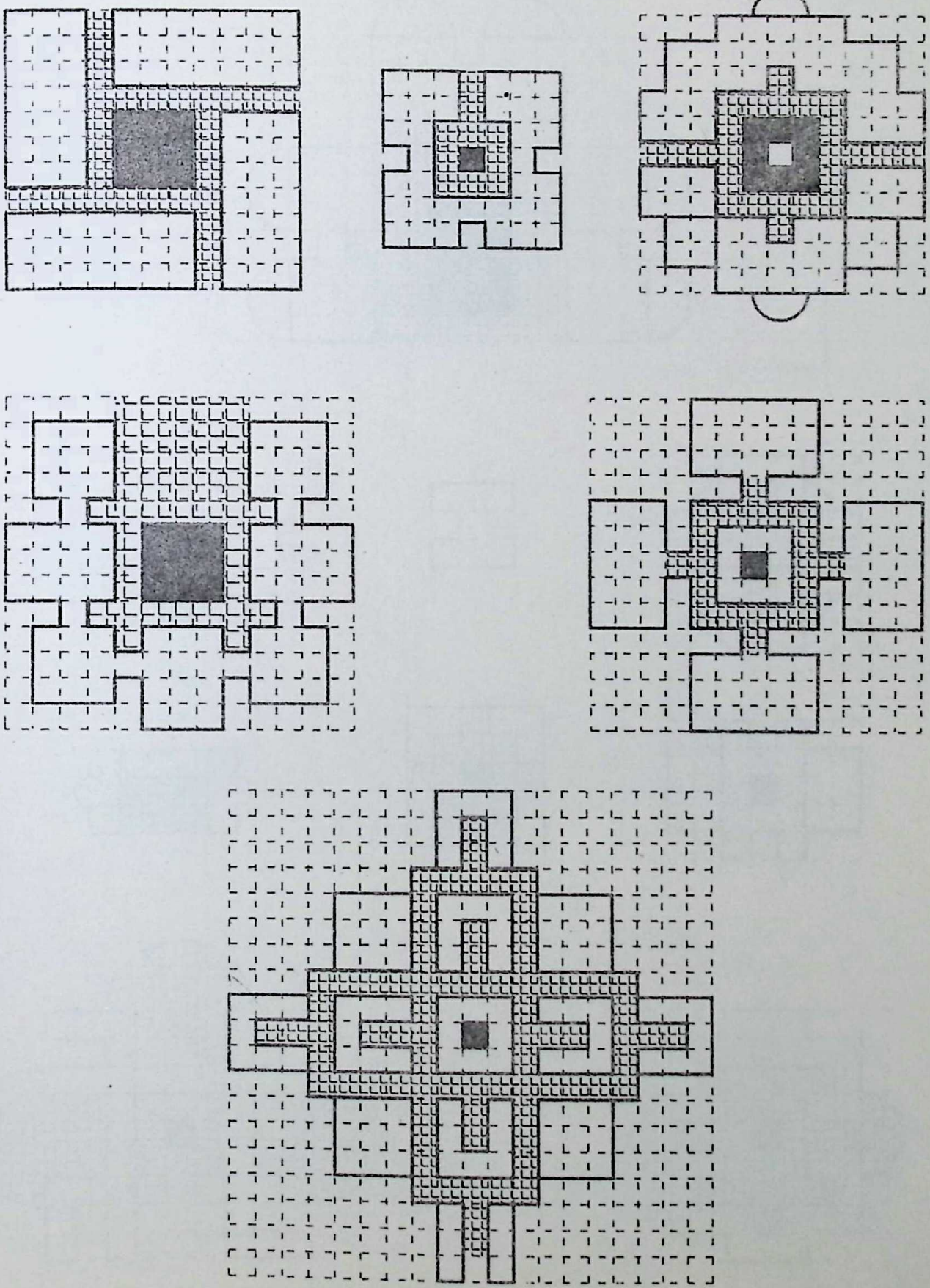
DEVELOPING ARCHETYPAL FORMS



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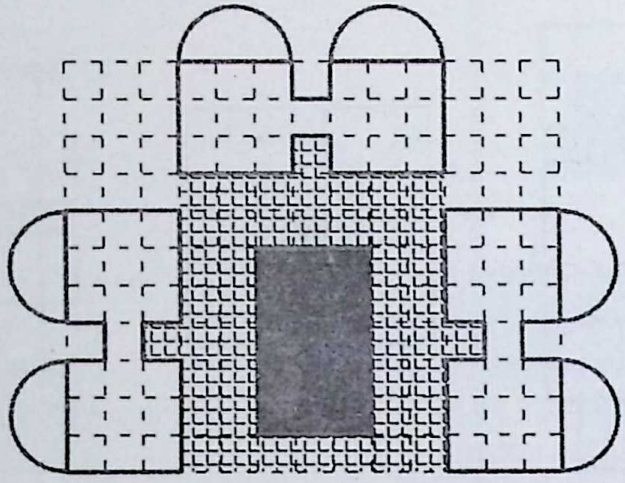

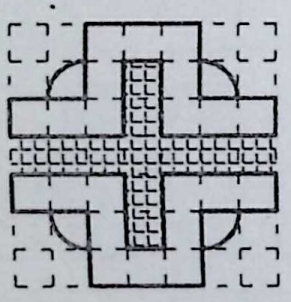

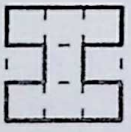

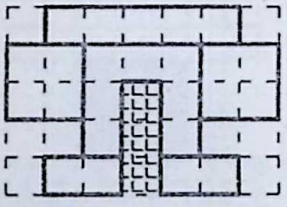

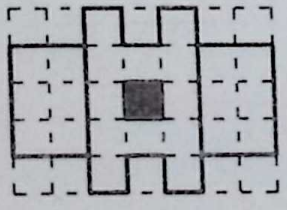

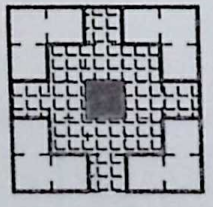

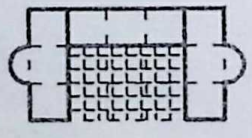

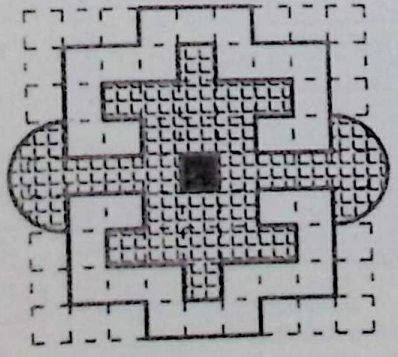

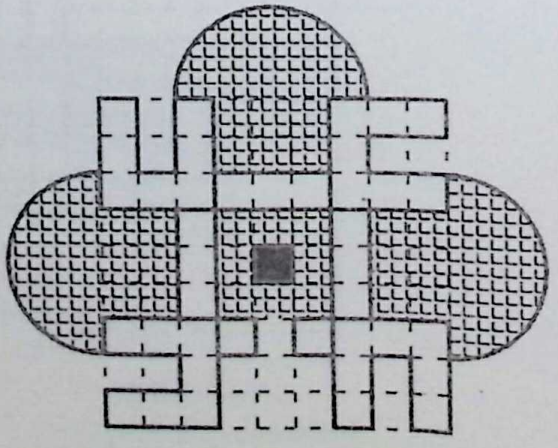

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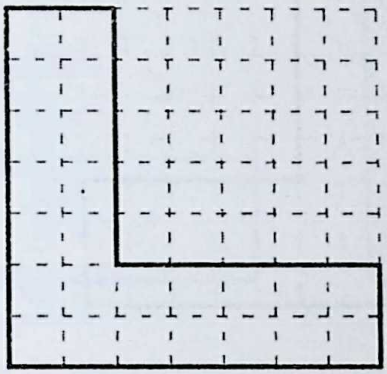
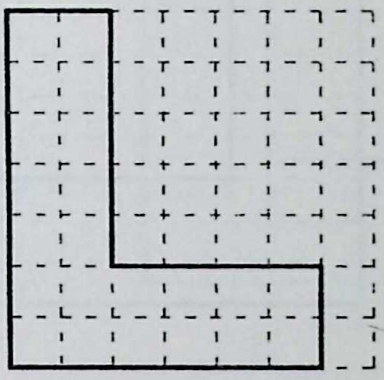
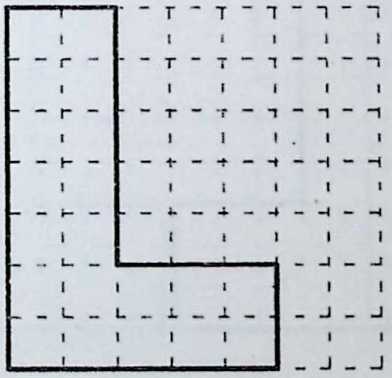
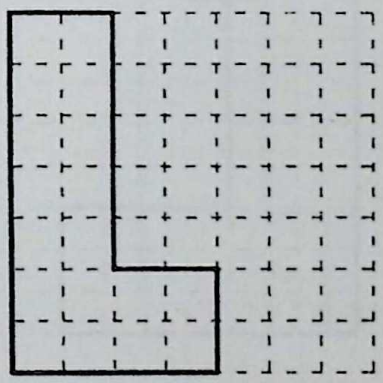
EXTRAPOLATED PATTERNS OF LAANGALA GRIHAM

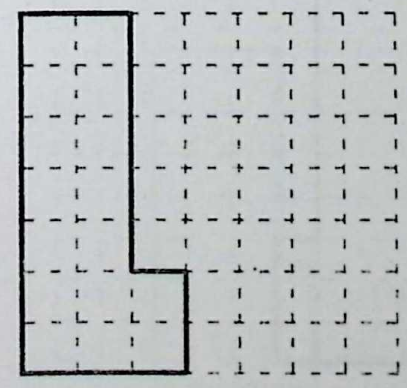
(7 x 7 Modules)

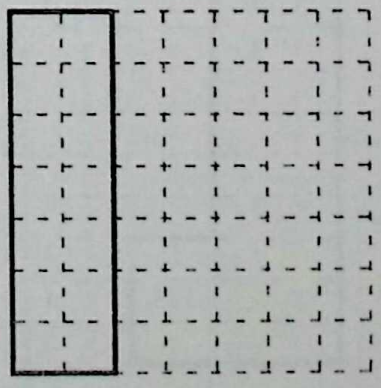












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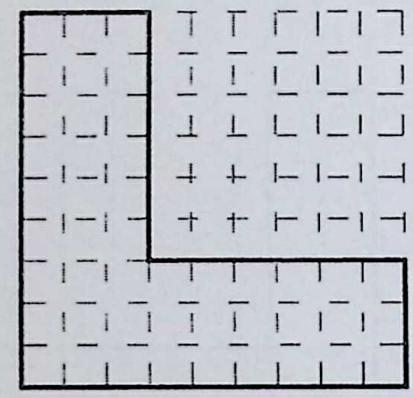
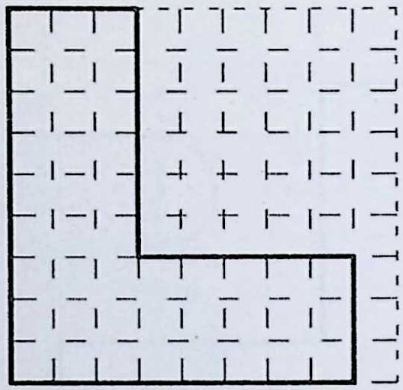
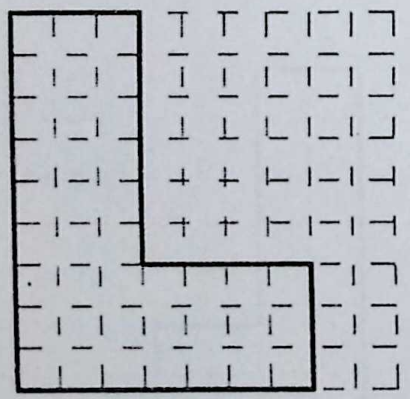
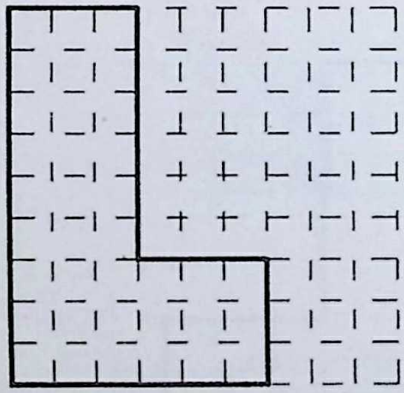
EXTRAPOLATED PATTERNS OF LAANGALA GRIHAM

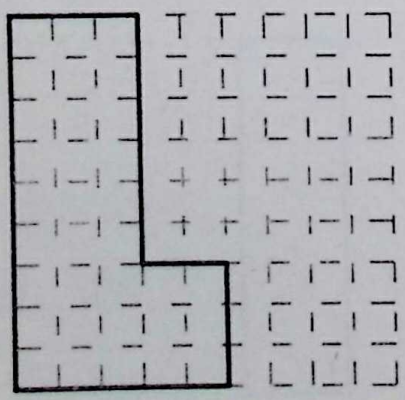
(9 x 9 Modules)

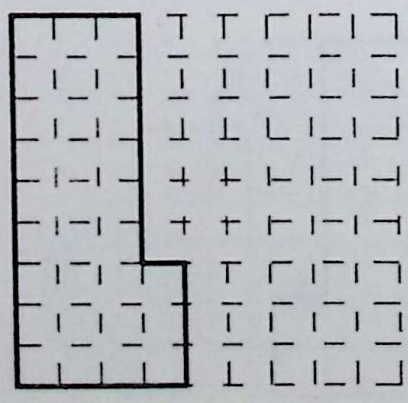












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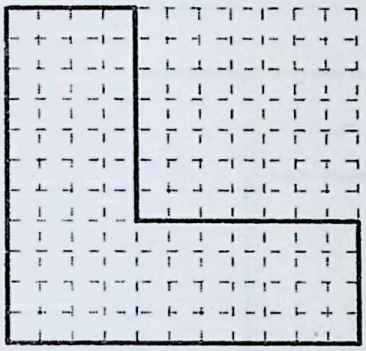
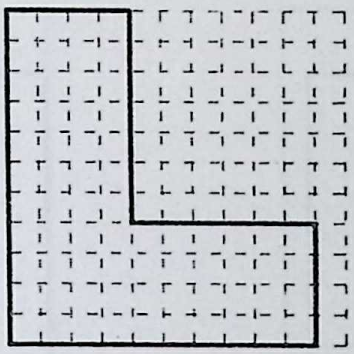
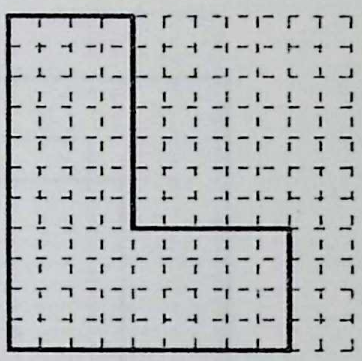
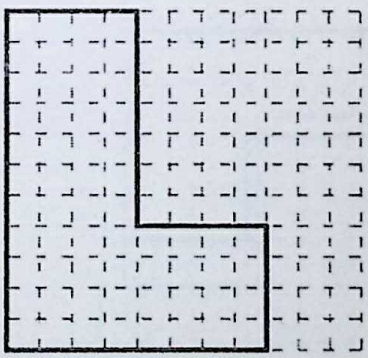
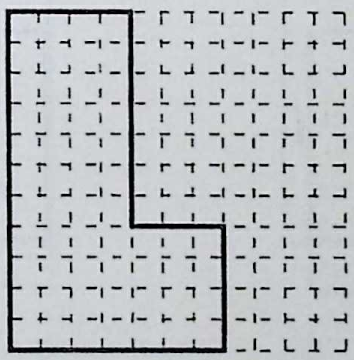
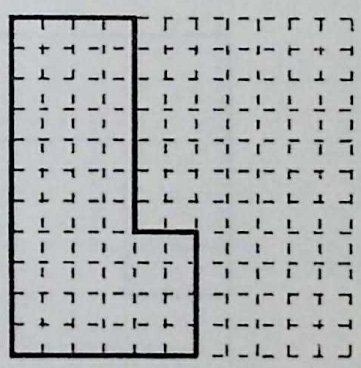
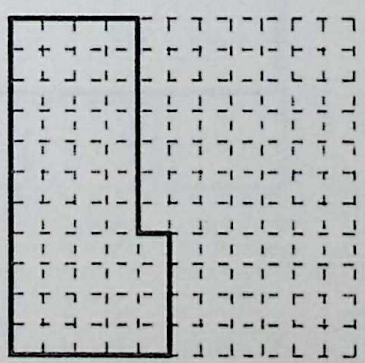
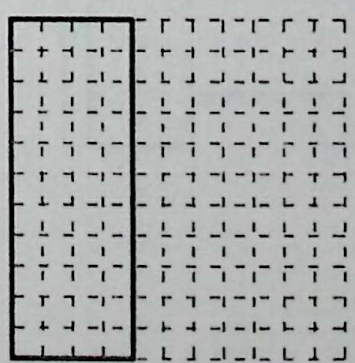

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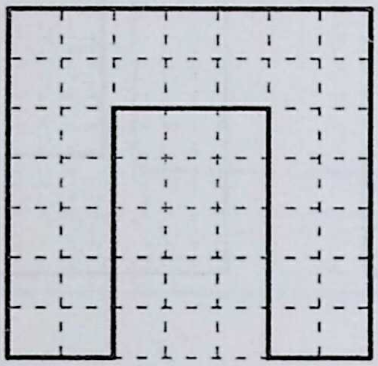
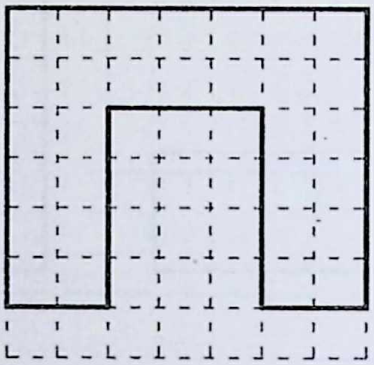
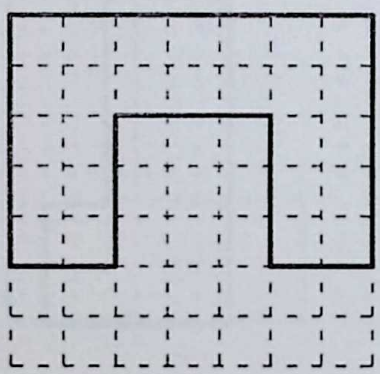
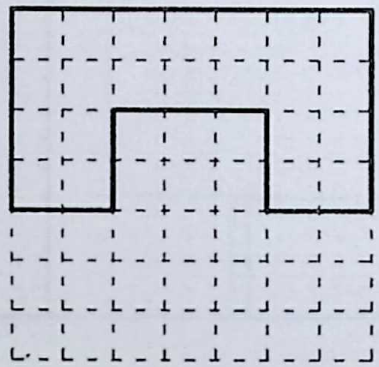
EXTRAPOLATED PATTERNS OF MOULIKA GRIHAM

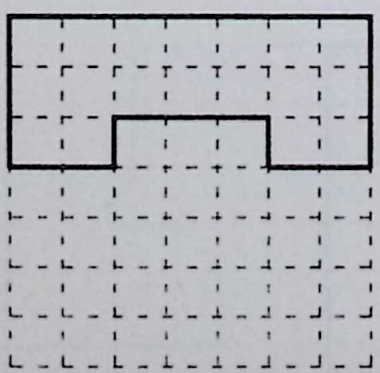
(7 x 7 Modules)

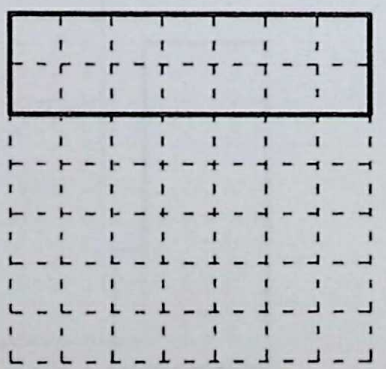












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EXTRAPOLATED PATTERNS OF MOULIKA GRIHAM

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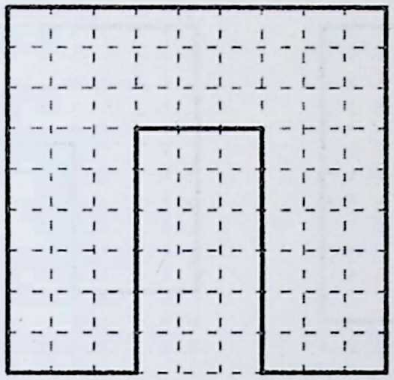

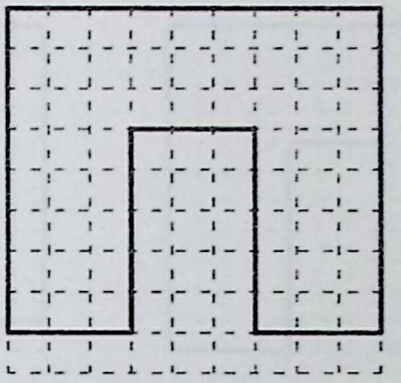

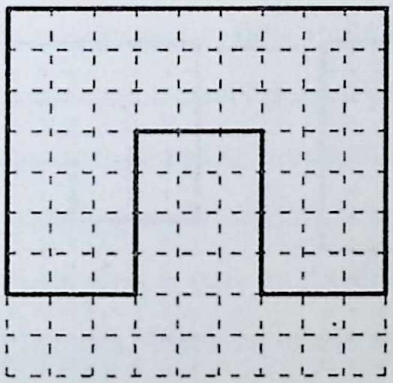

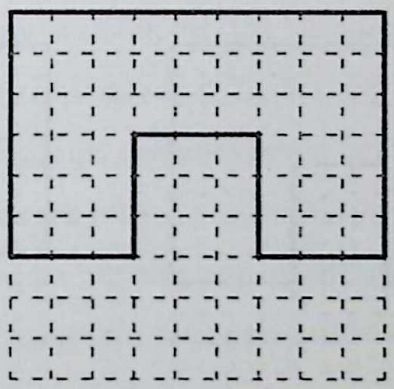

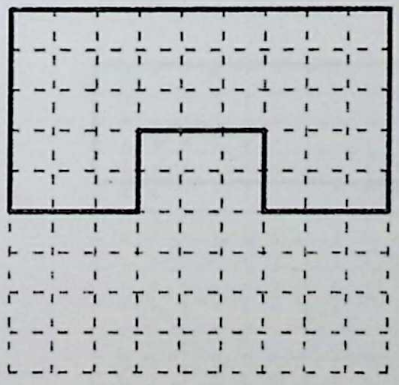

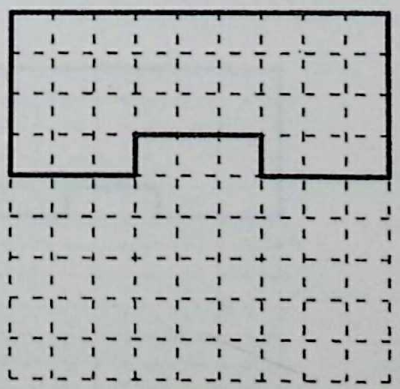

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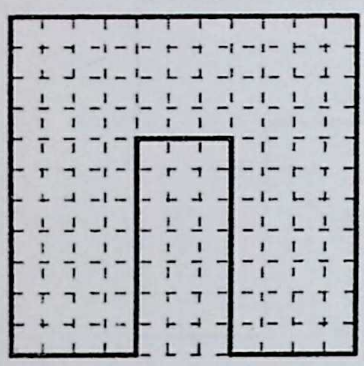
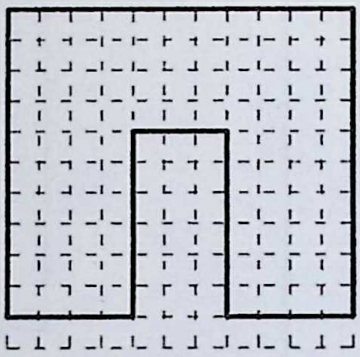
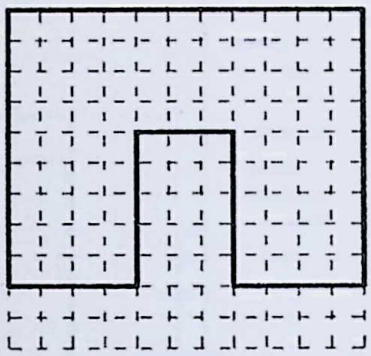
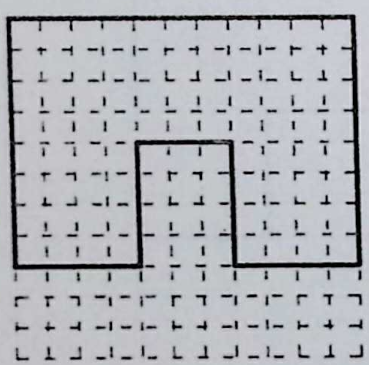
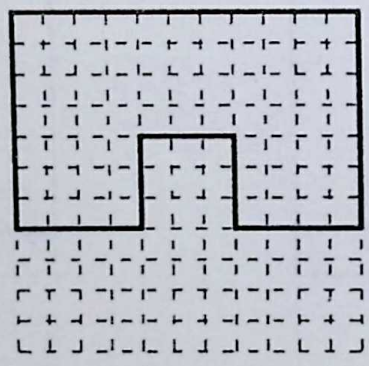
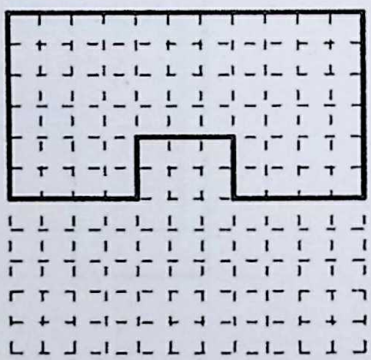
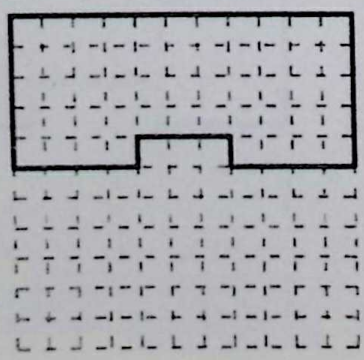
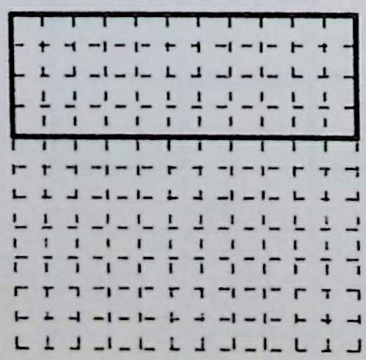
EXTRAPOLATED PATTERNS OF MOULIKA GRIHAM

(11 x 11 Modules)

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Model Designs Based on Vaastu Principles

The designs on the following pages are models of the buildings that are suitable for people with modern perception. It is explained in the given examples that Vaastu principles can be incorporated for any period of time. The illustrations range from the traditional residential buildings to the modern commercial buildings, each designed in an orderly manner resonating with the nature's law.The designs are only a preliminary schematic representation which can be modified and altered as per the requirements and the supporting factors. They are mere specimens which explain the application of Vaastu principles in detail.

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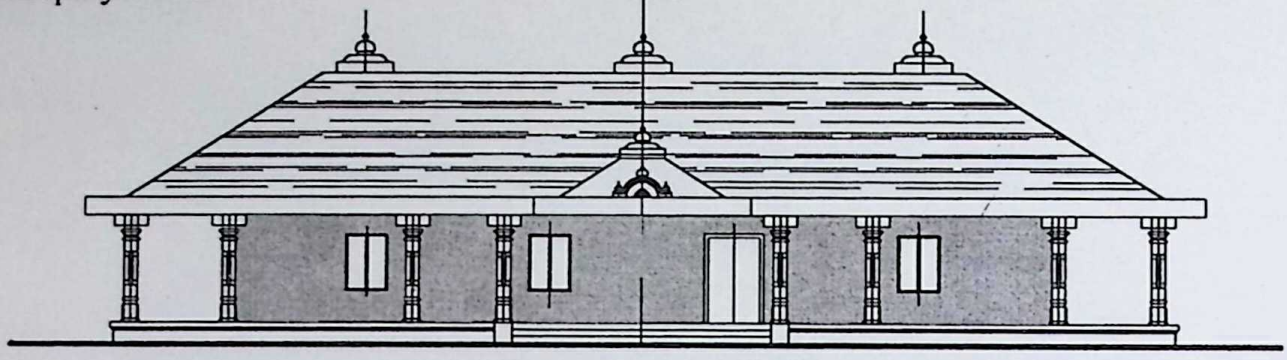
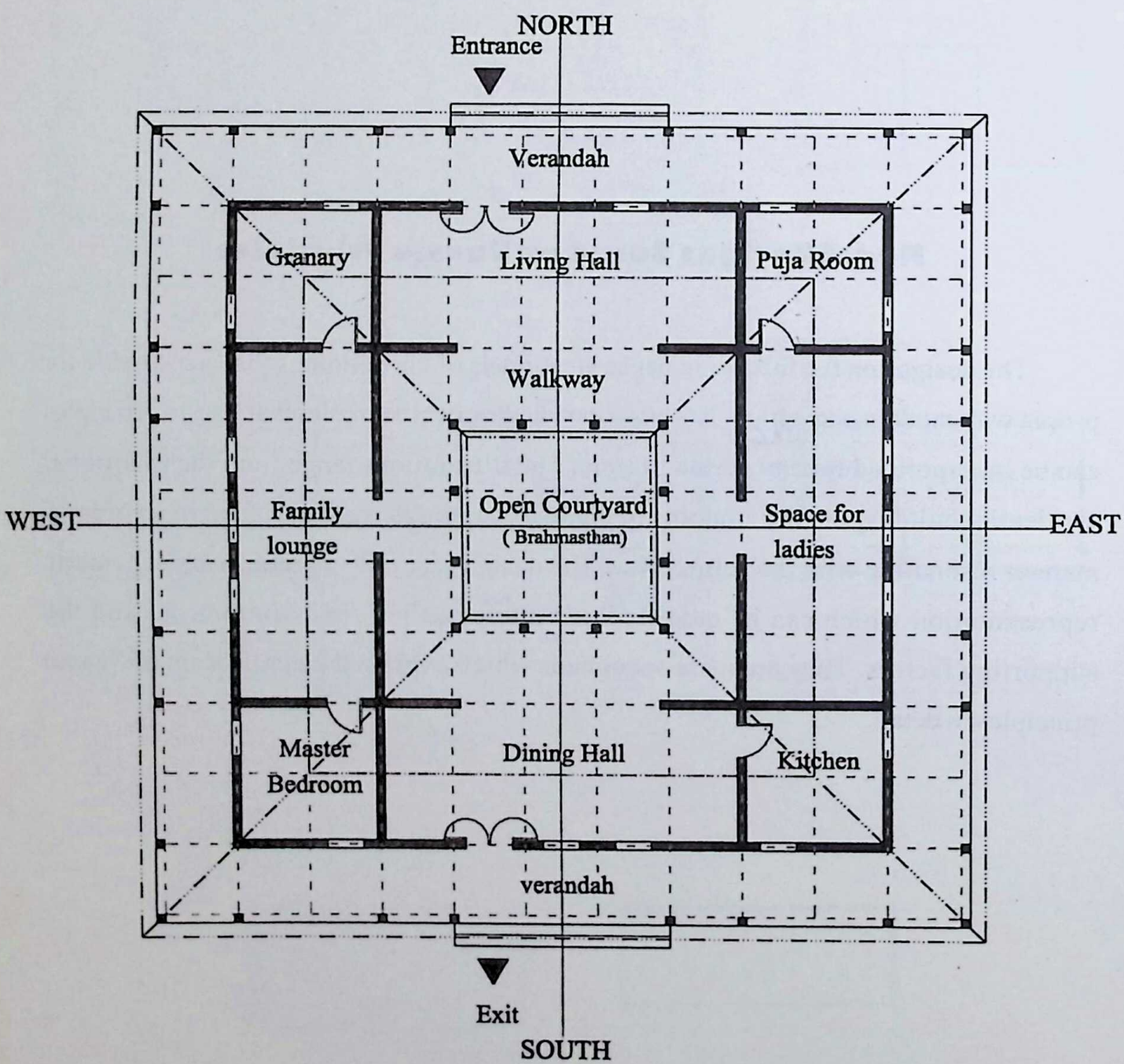


ELEVATION FROM NORTH



TYPICAL TRADITIONAL RESIDENCE

CHATURMUKHA GRIHAM

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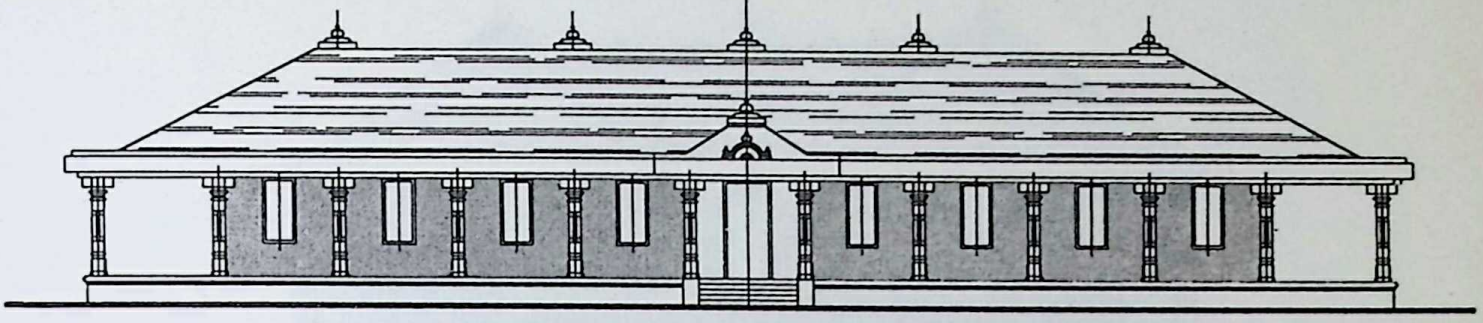

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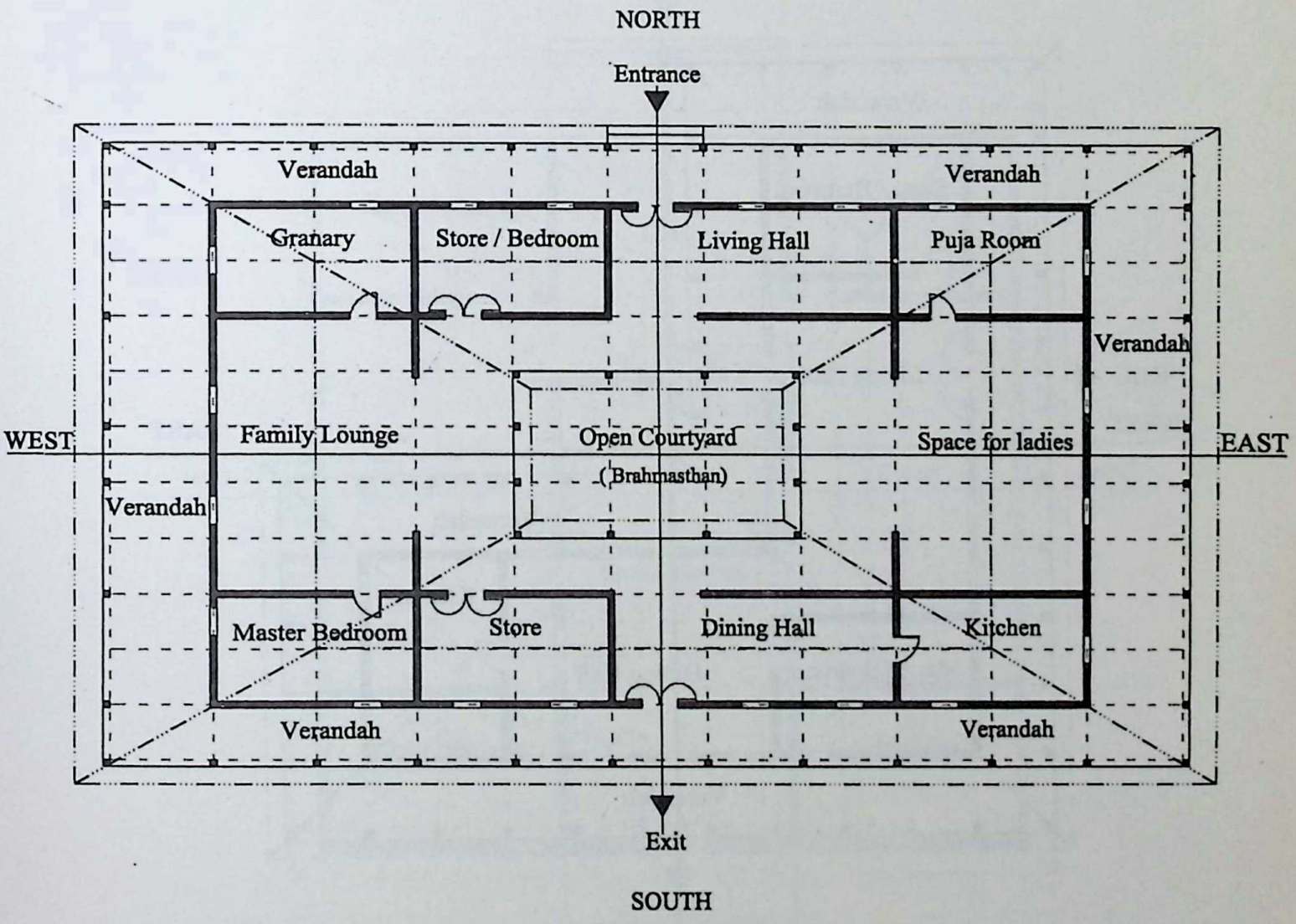
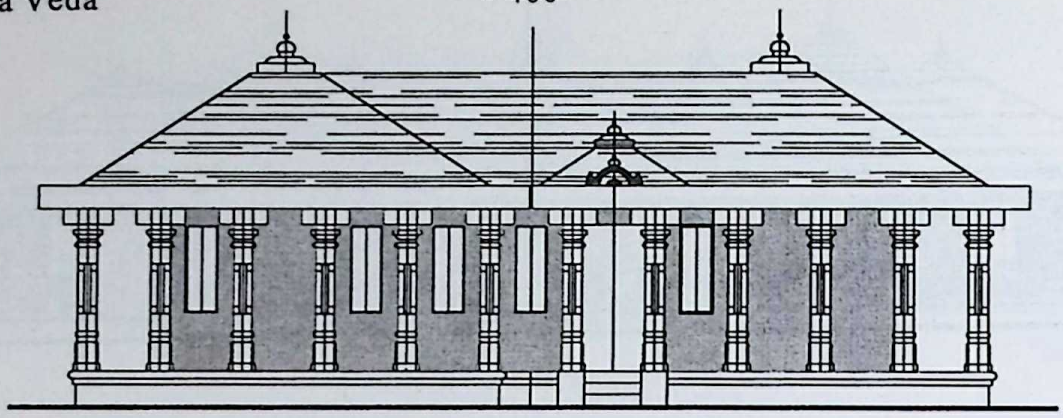


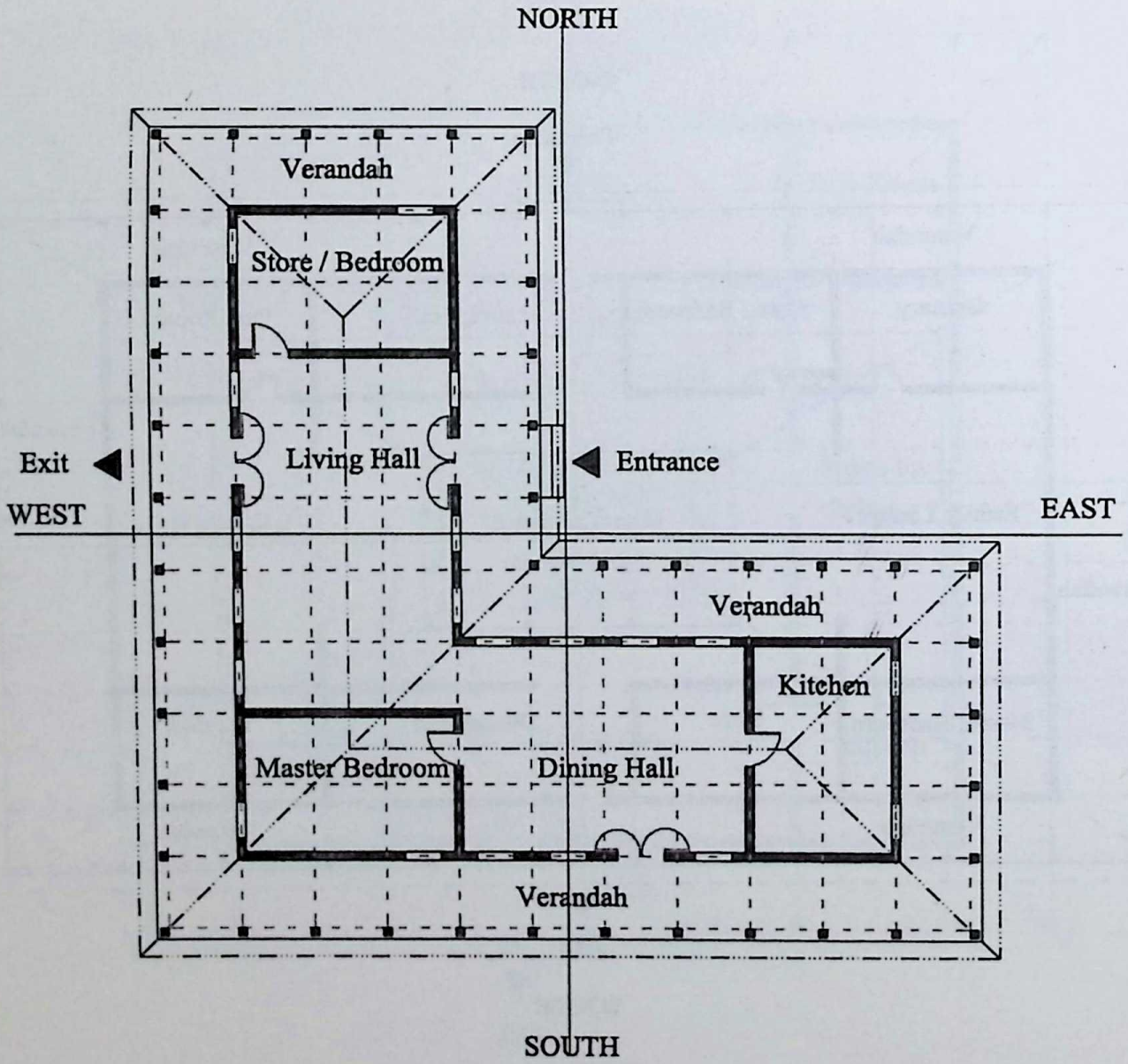
TYPICAL TRADITIONAL RESIDENCE

DANDAKA GRIHAM

Koviloor Digital Library



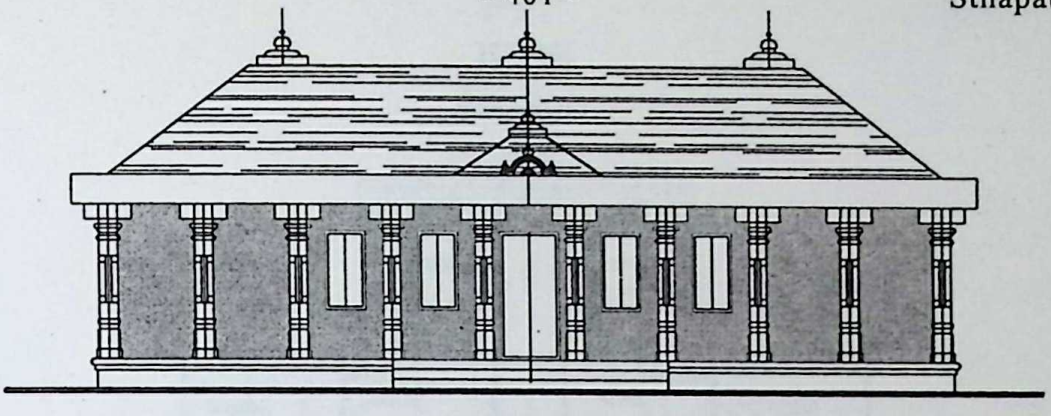
ELEVATION FROM EAST



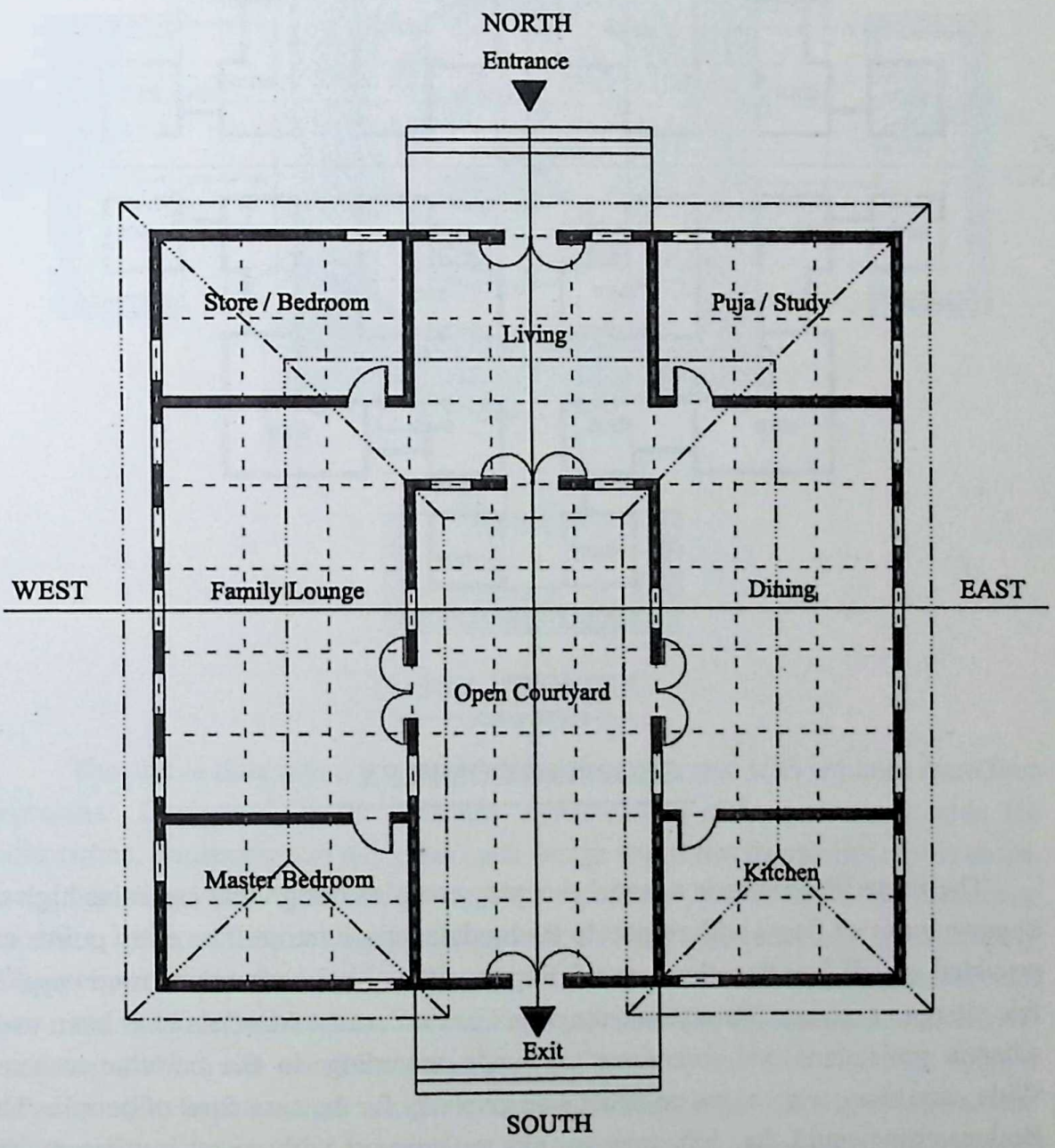
TYPICAL TRADITIONAL RESIDENCE

LAANGALA GRIHAM

Koviloor Digital Library



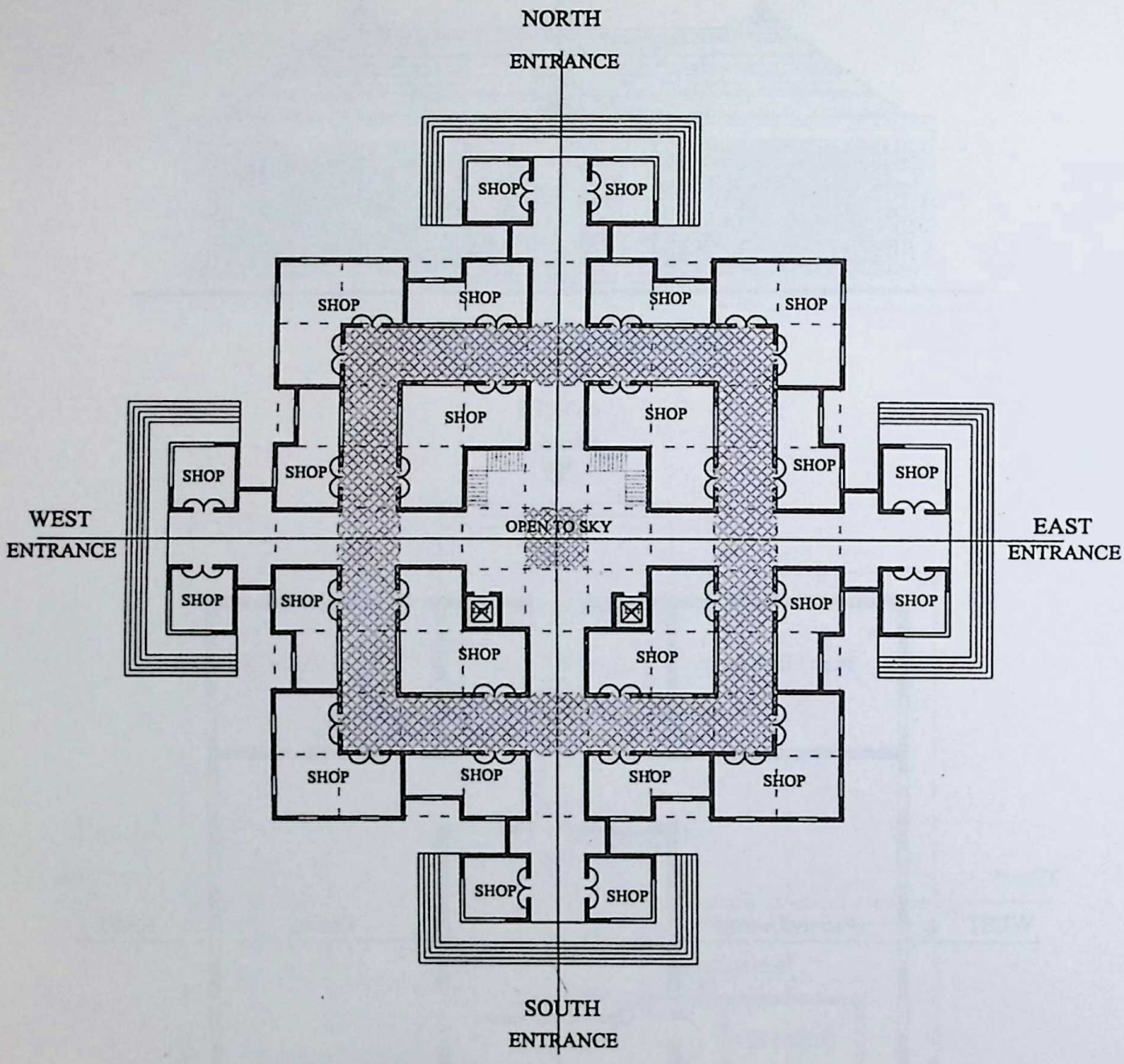
ELEVATION FROM NORTH



TYPICAL TRADITIONAL RESIDENCE

MOULIKA GRIHAM

Koviloor Digital Library



SHOPPING COMPLEX

The above illustration is a model shopping complex design that can raise high up to any number of floors with respect to the modular space frame. The entry points are provided on all four directions considering the site to have such access roadways. In this design, a square "Paramasaayika pada Vaastu Purusha Mandala" has been used wherein projections and recessions are made according to the modular measure. Wide corridors with shops on either side give way for the easy flow of people. The Brahmasthan could be left open to sky or covered with raised ventilators. The staircase and lift can be placed on the corners of the Brahmasthan and in no case in the center of it. The electrical and mechanical services that serve the building has to be placed in the "Agni corner" (Southeast corner) , since the quality of this zone fuses with the quality of the activity.

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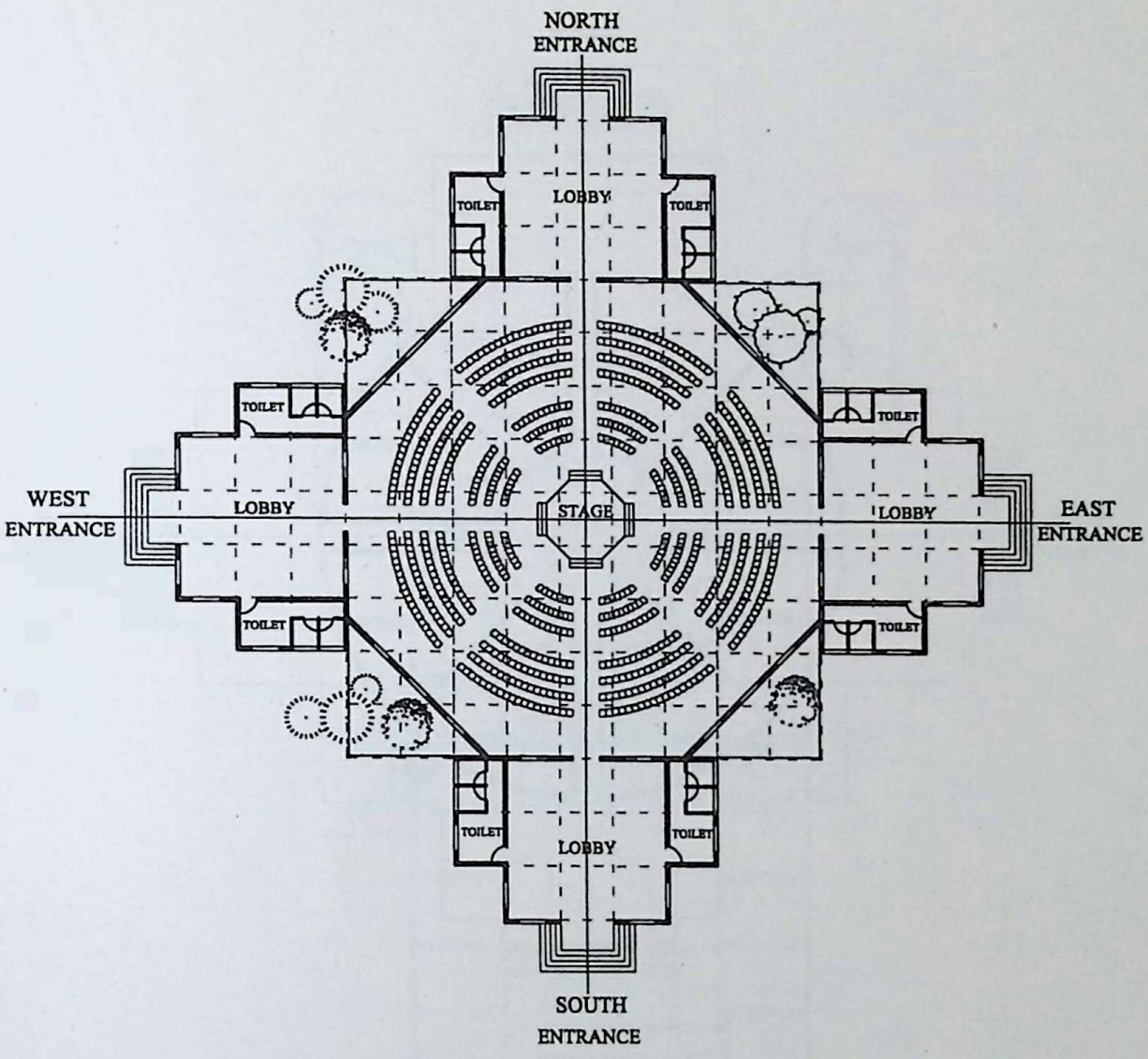

DANCE THEATRE

The above illustration is a model dance theatre design with entrance from four directions. Octagonal shape indicates dynamism which is most suitable for auditoriums, museums and any other such design that suites the quality of this shape. The projections provided on the cardinal directions can be used for secondary activities like a snack bar, ice cream parlour, children's entertainment areas, display hall,green rooms,administration office for the theatre,mechnical and electrical service areas, etc. The toilets can be provided as indicated. The entrance can be restricted according to the site conditions and need not be on all four directions. The stage is placed in the Brahmasthan which is the high energy zone that will accentuate the performance of the artists. In olden days, the artists used to perform in the center with audience seated all around. This is the ideal design for a performing arts theatre. The stage can be placed on one face of the octagonal enclosure also.

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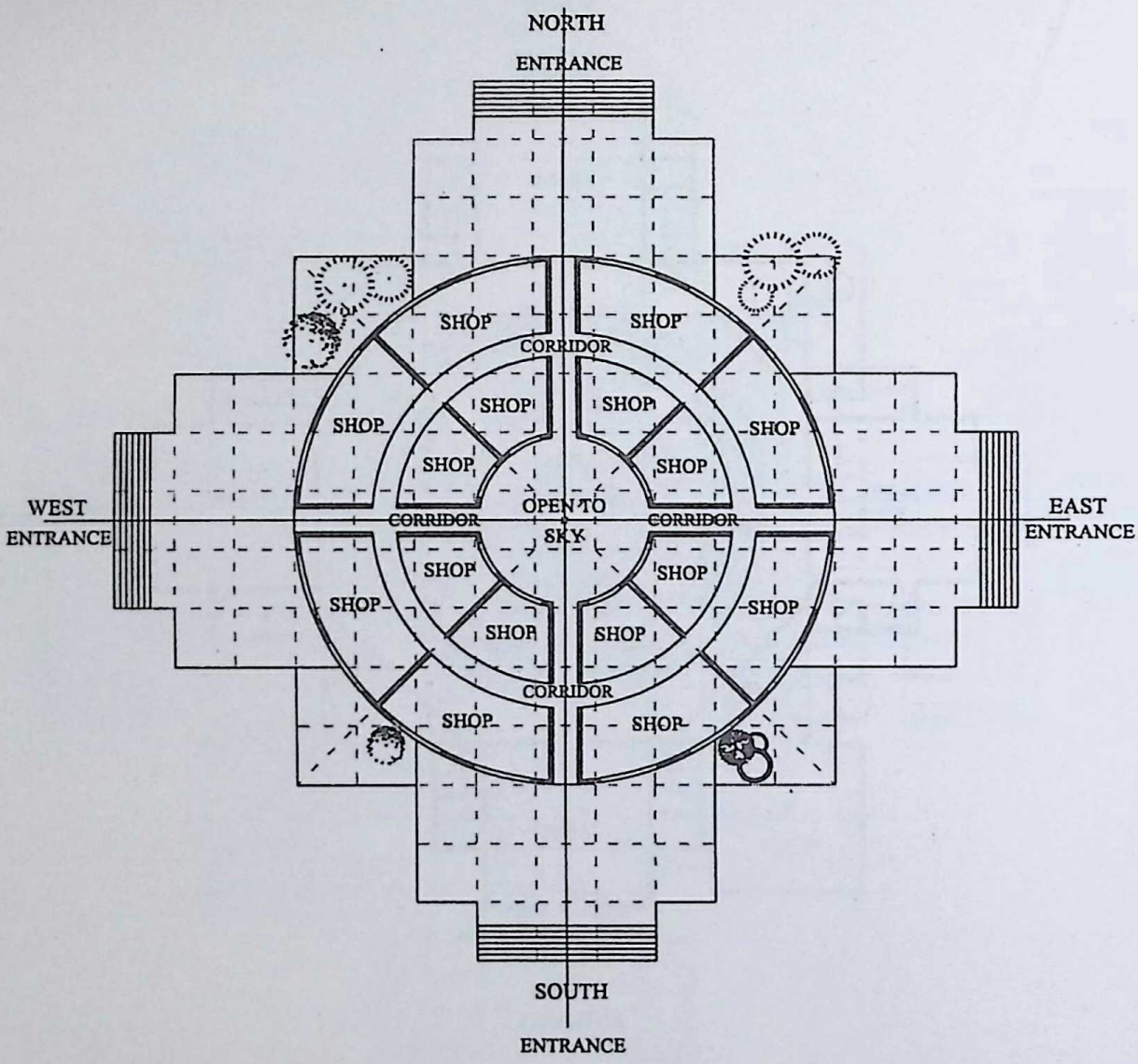

VEGETABLE MARKET

Different shapes have different qualities. According to the functional requirements the shapes of a layout can be chosen as per Vaastu principles. There are three basic shapes - Square, Octagon and a Circle. Each form has its significant quality. The square is the most stable form which can harness energy, thus making it suitable for applying in any building design. The octagon is a dynamic form that has to be used for a selected type of structures only. The circular form denotes maximum agitation. The above three forms represent the three basic - Saatvika, Raajasa and Taamasa gunas or qualities.In this vegetable market design,a circular layout is adopted because it is a public place with highly chaotic activities occurring. The central zone is left open to sky with corridors running along the cardinal directions. Entry points are provided on North, South, East and West.

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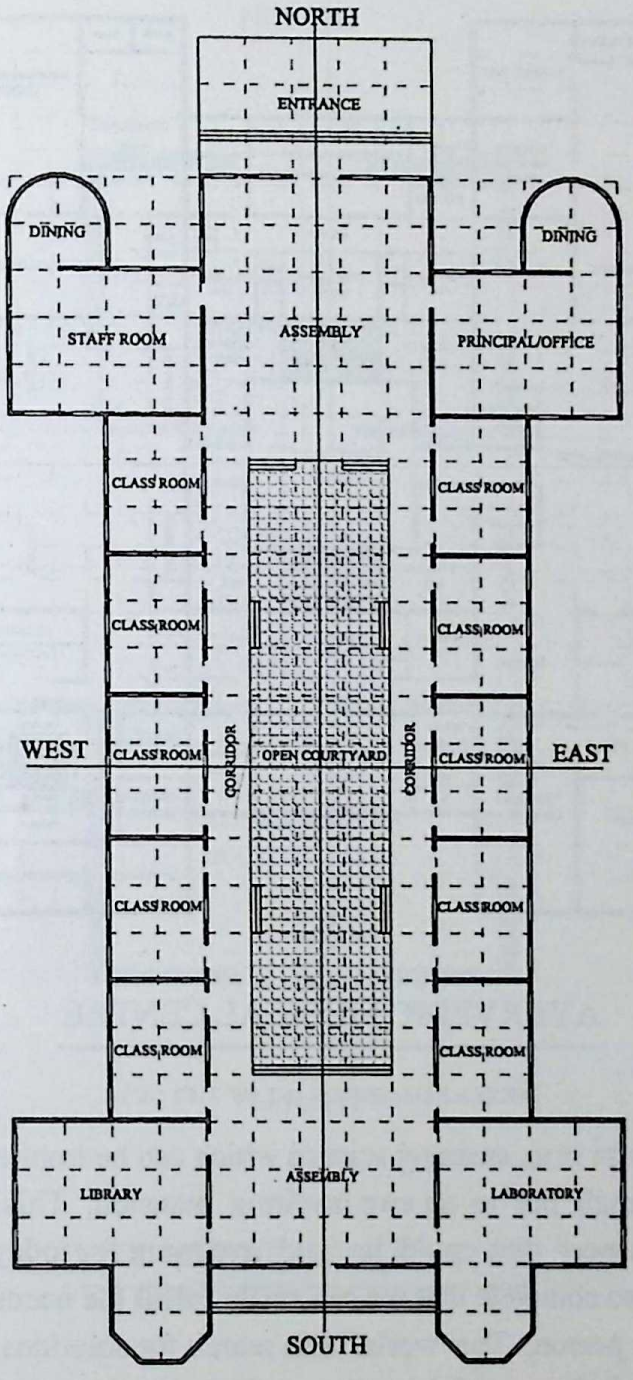
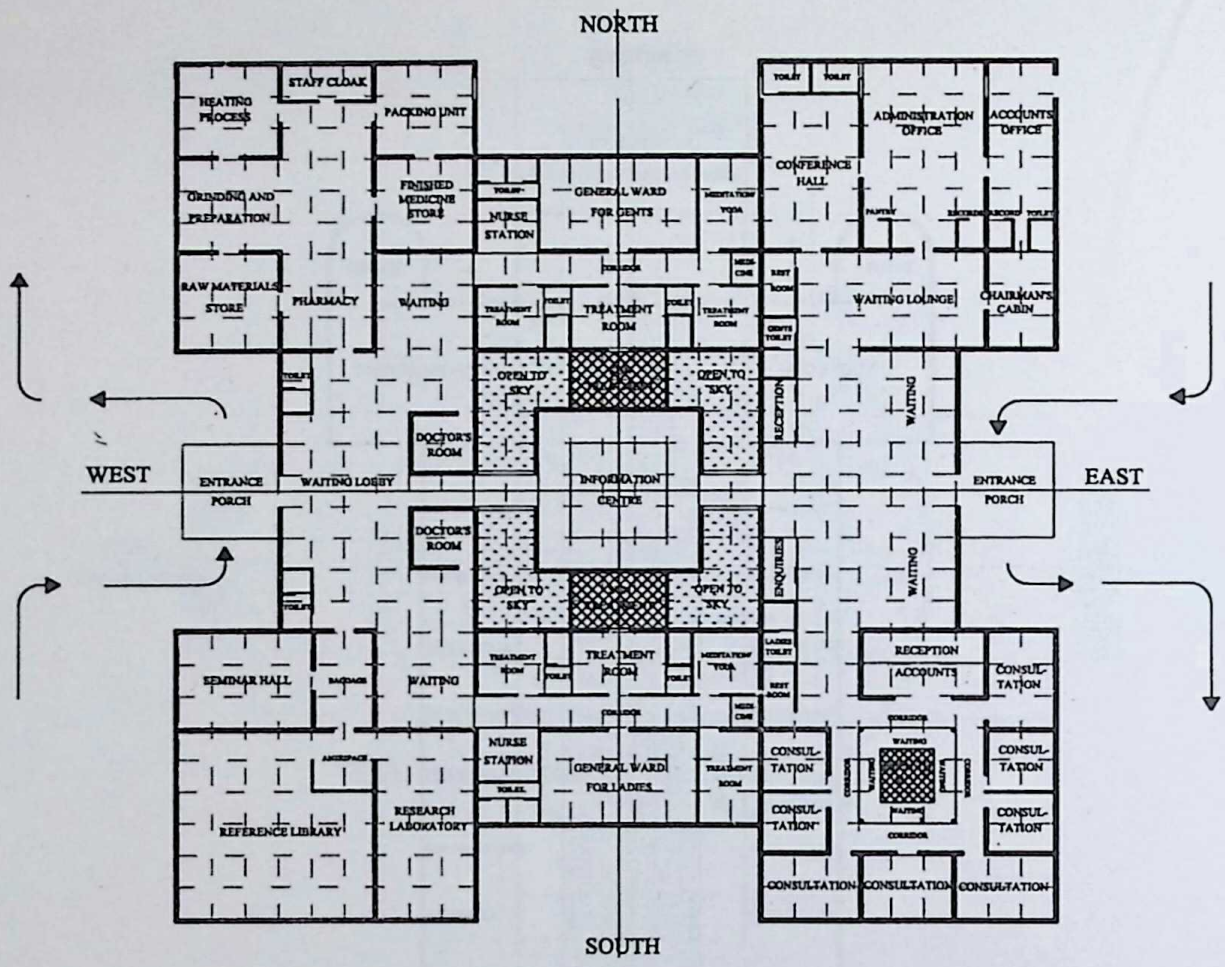


SCHOOL BUILDING

A typical school layout with central courtyard and classrooms all around connected by wide corridors with the entry on North. The principal's cabin and administration office are located in the Northeastern corner. The Southwest is allocated for the library and a laboratory for students is placed in the Southeast corner. The Northwest corner is occupied by the staff. In this design the main mother grid is 13 x 21 units, wherein all the major requirements are placed. The projections that are indicated as semi-circular and semi-octagonal forms are permissible so far as they fall on the extended modular grid.

Koviloor Digital Library

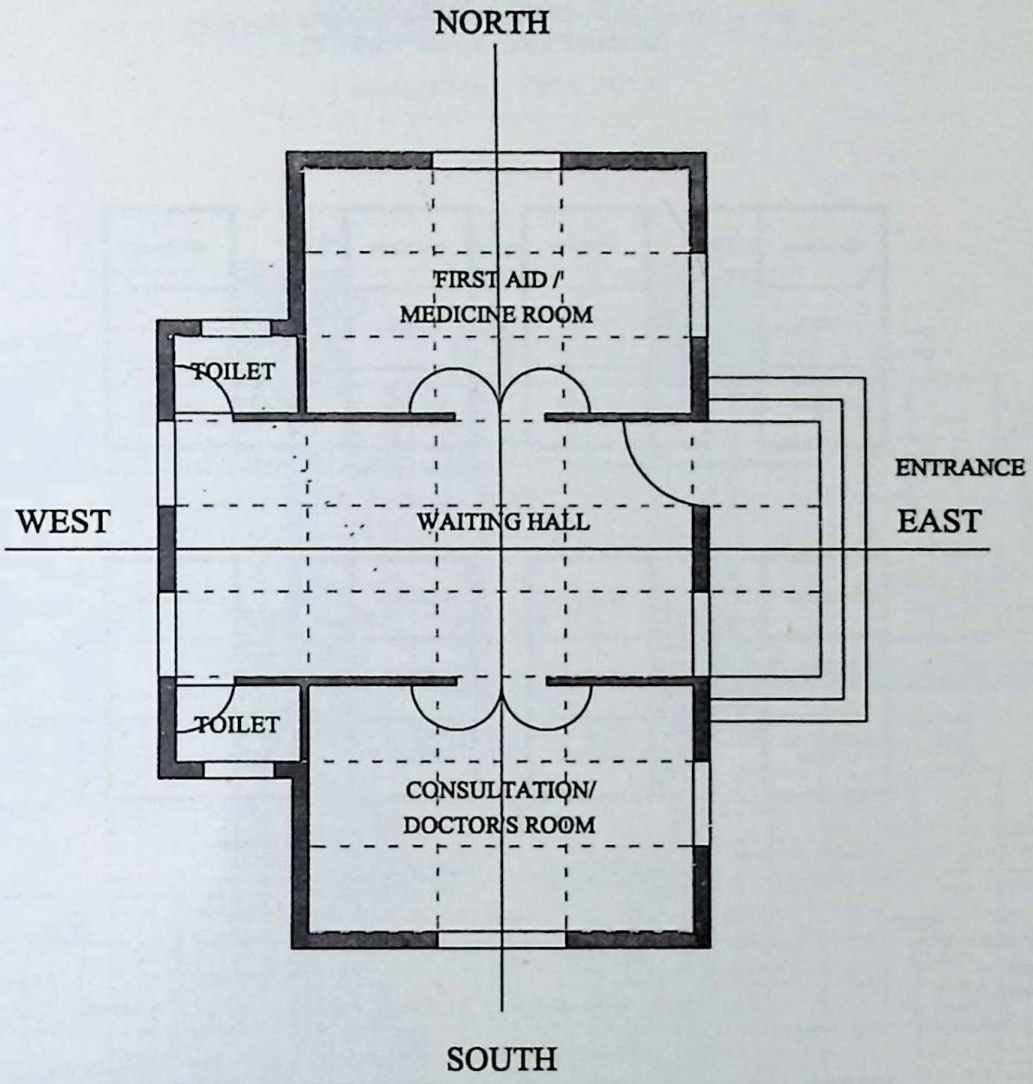


AYURVEDIC MEDICAL CENTRE

(MODULE DIMENSION - 6'2 5/8" X 6'2 5/8")

Vaastu shastra is an amazing science which can be implied for designing any structure from a small hut to an awe inspiring mansion. This science has not left behind any such aspect that could be said irrelevant for today's modern building requirements. It is so complete that we can easily fulfill the needs of any time at any place and for any person. The world is in search for solutions that could establish a peaceful healthy living condition. Ayurveda is another ancient field similar to Vaastu shastra, that has gained recognition worldwide. More and more structures are erected to promote and enjoy the goodness of this valuable science.The above design is a model for one such centre which heals the people and also provides facilities for research students. The entrance is from the East which is the most suitable direction for improvement of health. 27 x 27 module has been adopted for this design. The Northeast is allocated for the administration zone, Southeast for the consultation, Southwest for the research and the Northwest for medicine preparation. Wards are placed on the North and South. Entrance on the west serves the inpatients and the research people.

Koviloor Digital Library



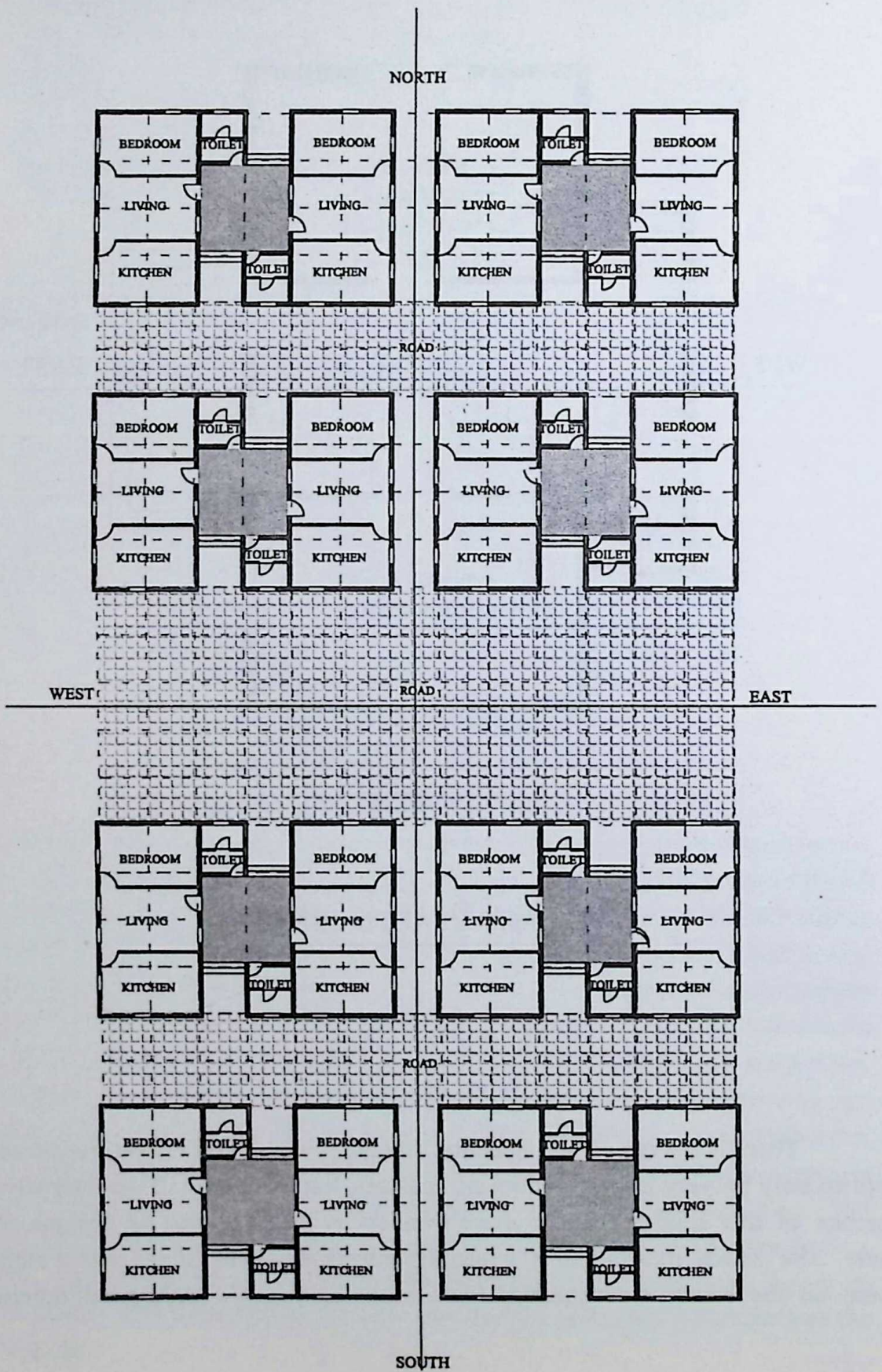
VILLAGE HEALTH CENTRE

There is always a misconception that the principles of Vaastu shastra can be applied only for very huge mansions and palaces, but it is not so. If we internalise the essence of this science, we can make wonders by implementing for designs of any scale. The above illustration is a health centre for a small village with a medicine room on the North, a consultation room on the South and a waiting hall inbetween.

Koviloor Digital Library

LOW COST HOUSING

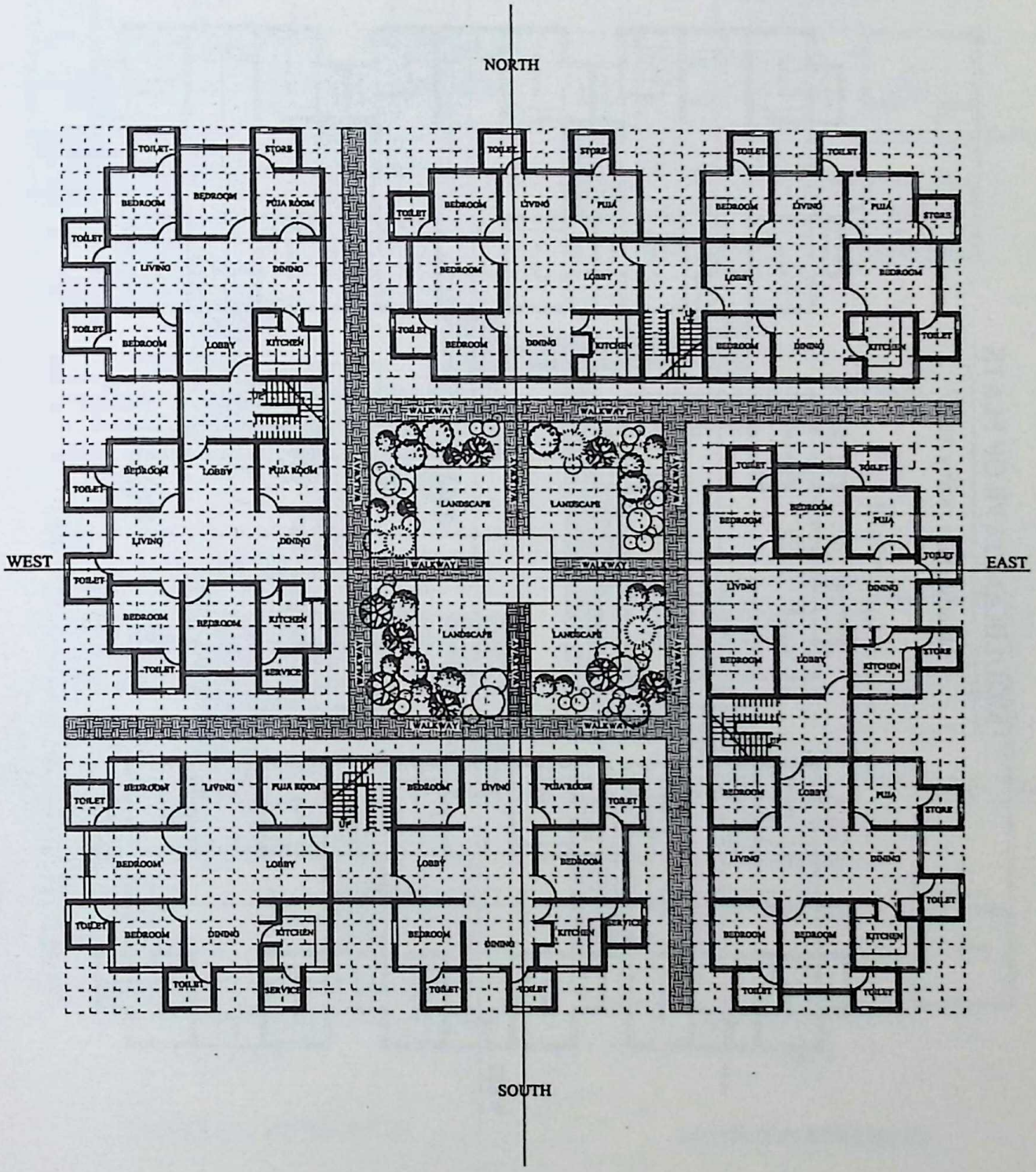
(MODULE SIZE - 8'9 1/2" X 8'9 1/2")



Koviloor Digital Library

NANDYAVARTHAM TYPE OF FLATS

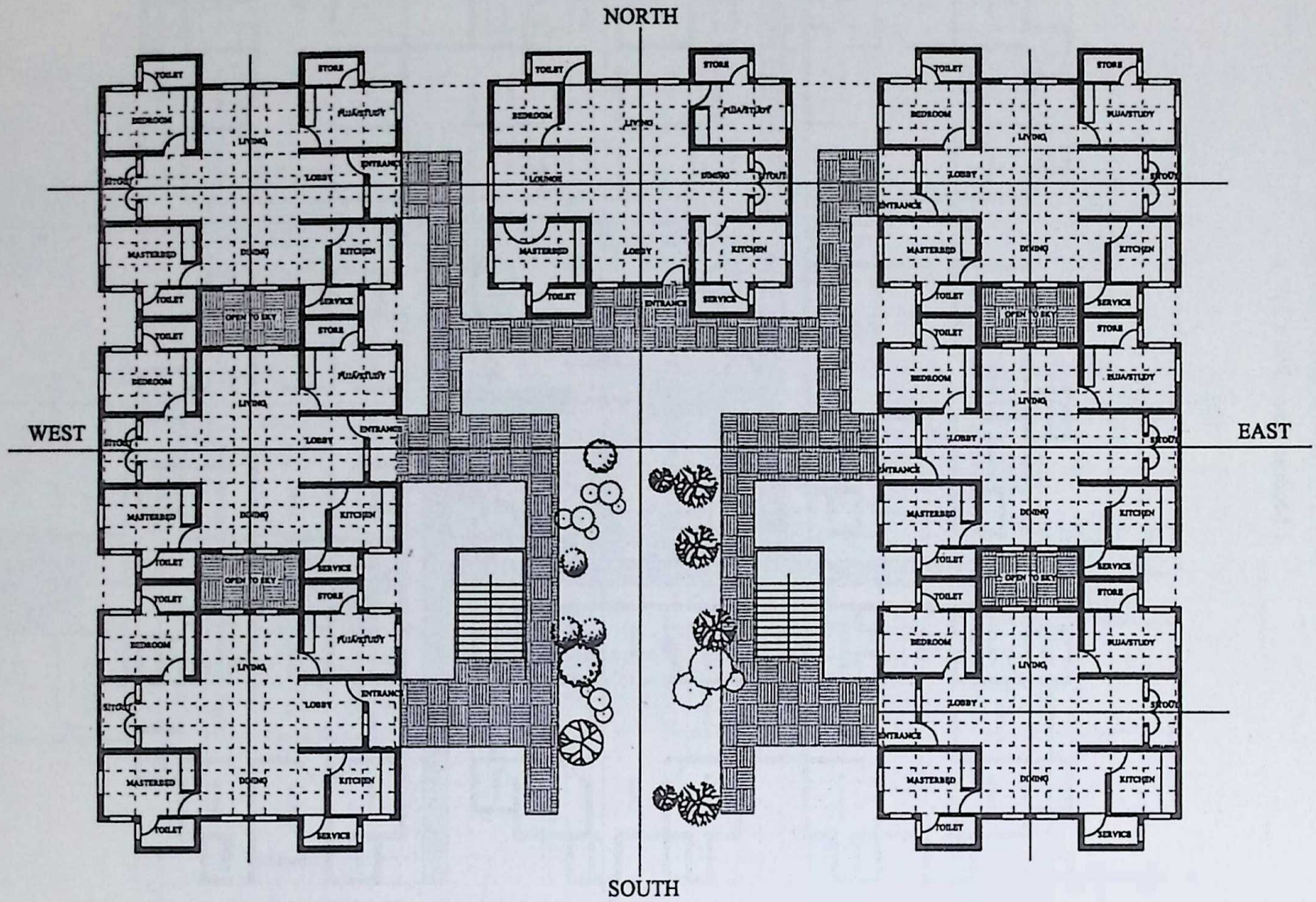
(Module Size : 3'6" x 3'6")



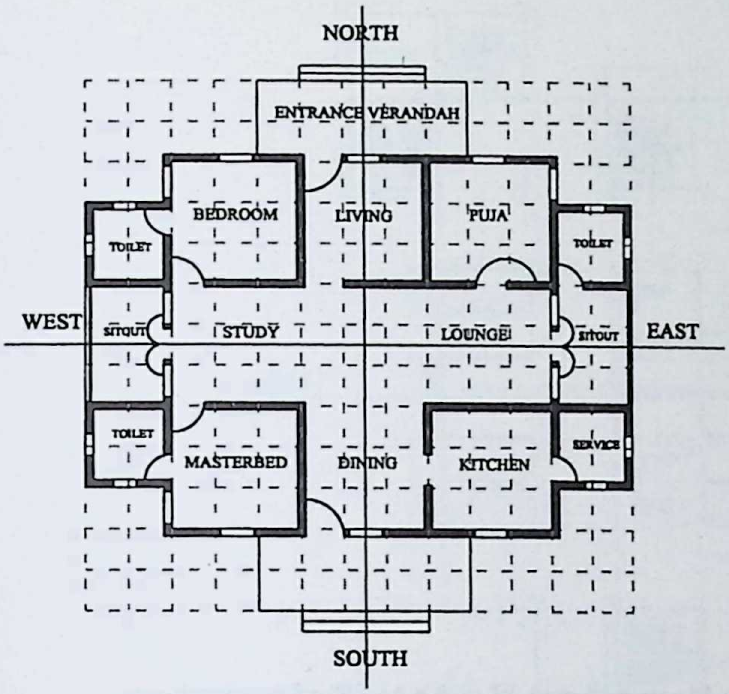
Koviloor Digital Library

MOULIKAM TYPE OF FLATS

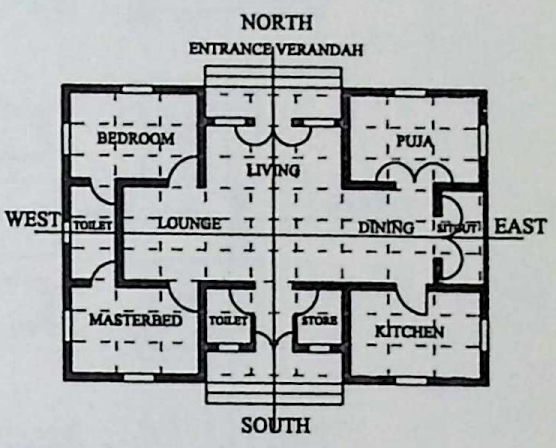
(Module Size : 4'6" x 3'0")



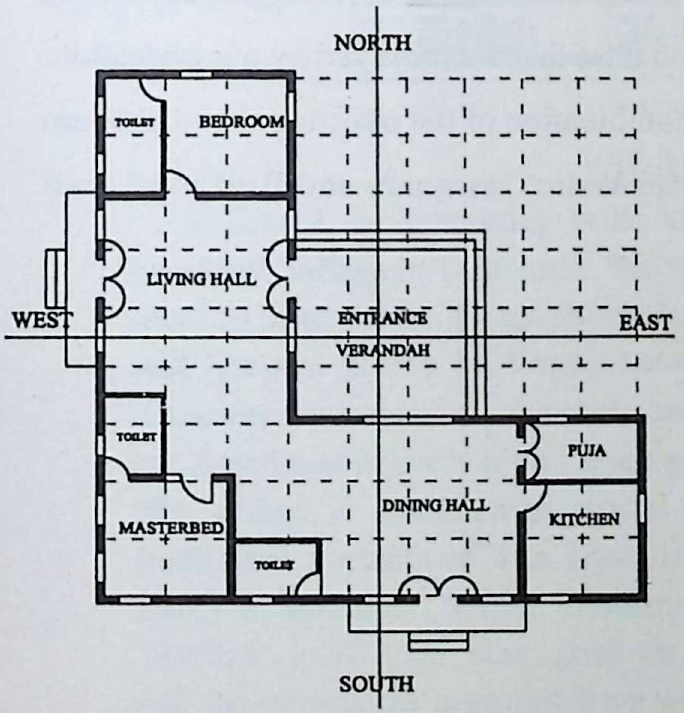
Koviloor Digital Library



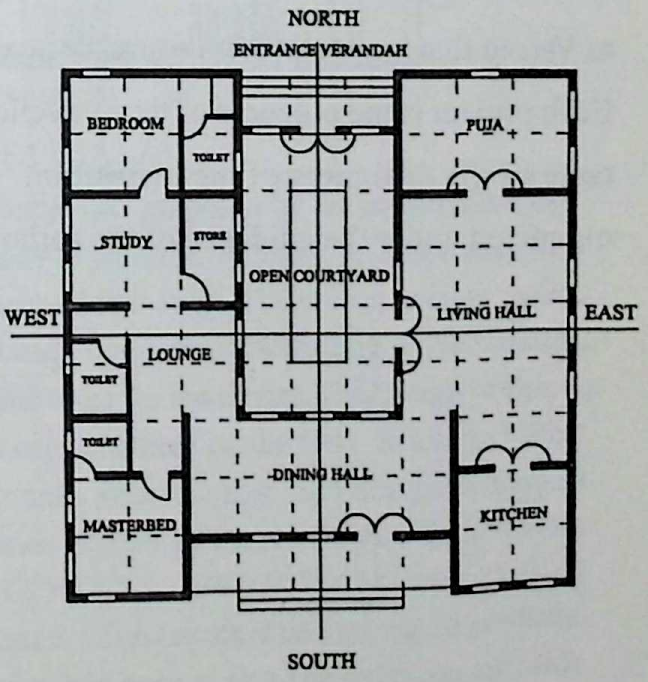
CHATURMUKHA RESIDENCE



DANDAKA RESIDENCE



SWASTIKA RESIDENCE



MOULIKA RESIDENCE

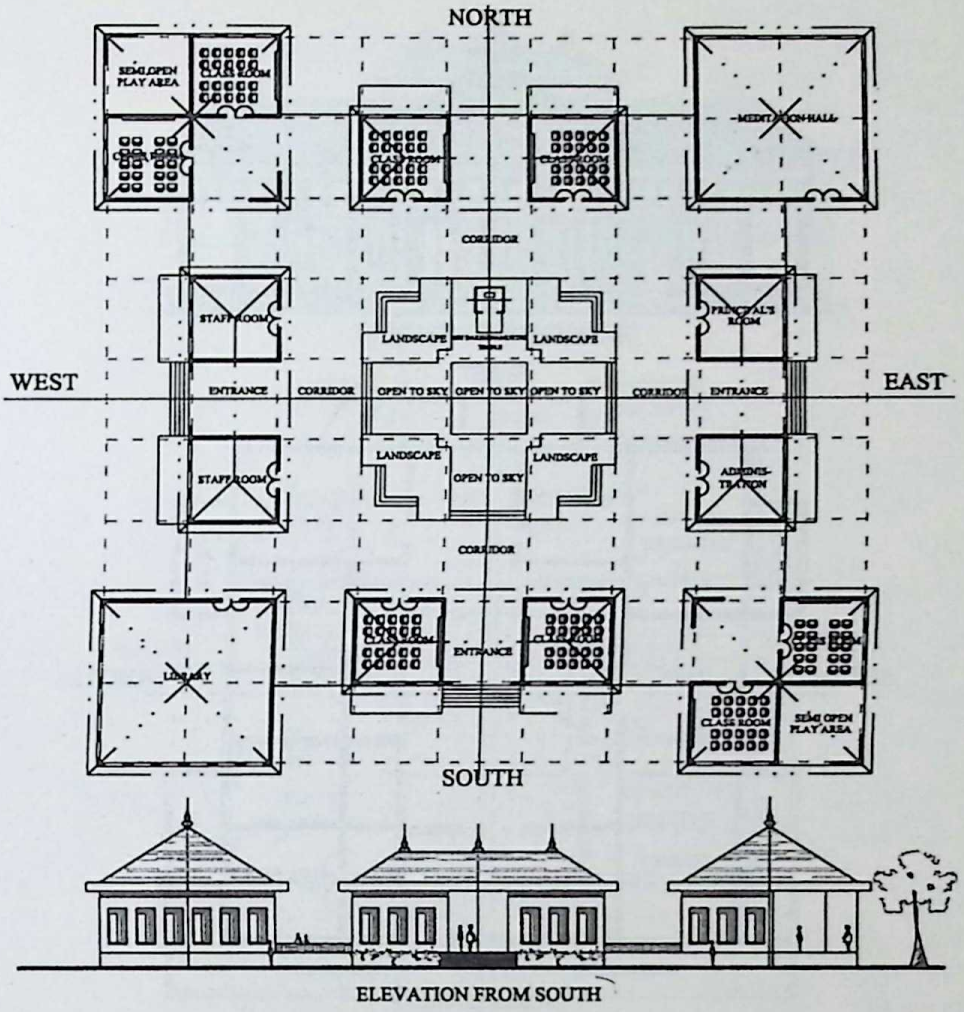
MODERN RESIDENCES USING TRADITIONAL CONCEPTS

Koviloor Digital Library

Completed Building Designs Based on Vaastu Principles

The succeeding designs are the projects that are constructed at various places in and around Chennai. As per the client's request, their buildings were designed according to Vaastu that has made them enjoy the peace and bliss that was enjoyed by our ancestors. Each project is the outcome of the marvellous combination of the traditional and modern taste of the designers of the institution "Vaastu Vedic Designers and Builders" well organised under the guidance of the author.

Koviloor Digital Library

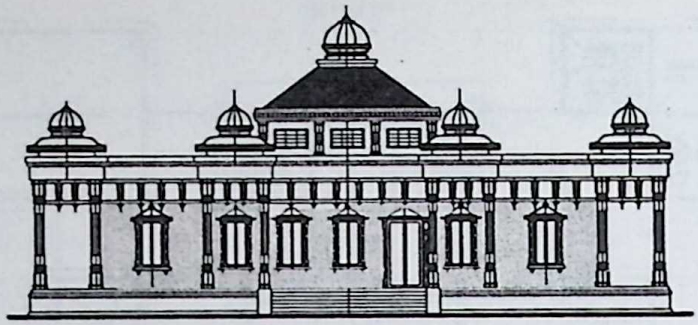


ELEVATION FROM SOUTH

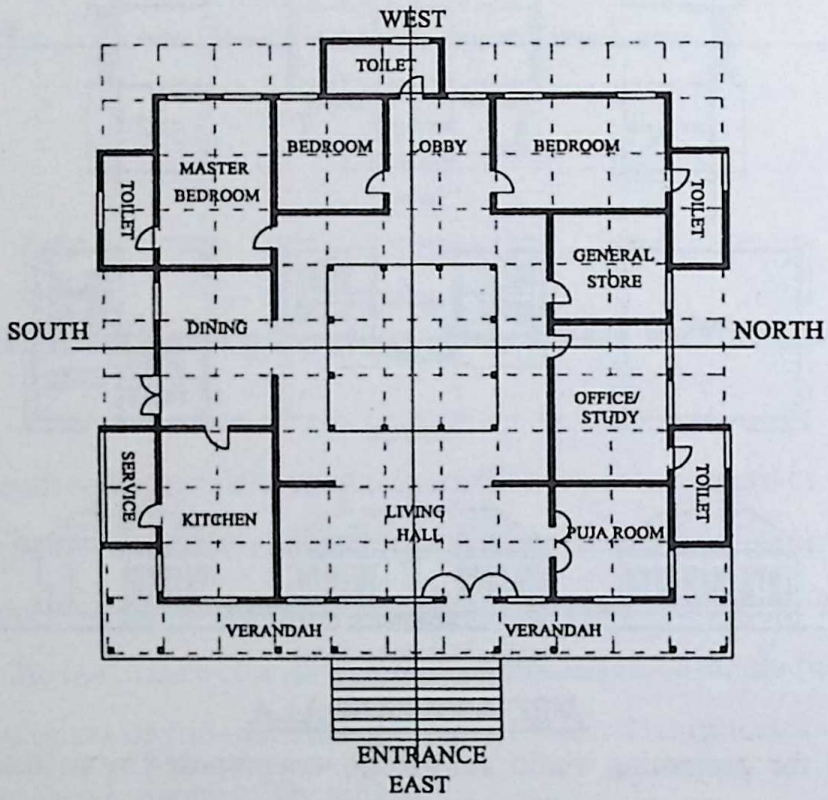
VEDA PATASHALA

A school for promoting vedic knowledge was proposed by an industrialist, at a beautiful village in Tamilnadu. The idea was to promote the vedic sciences at school level through the traditional Gurukula system of education. The school where vedas and shastras are to be taught, has to be itself constructed according to the shastras. This was the reason why the client had come to us for the design.The design is simple but functional in every aspect.Entry points are punctured on the East, South and West. The design is restricted to ground floor only with sloping roof design to create a traditional appearance. The layout is a basic square of Paramasaayika Pada Vaastu Purusha Mandala (9 x 9), measuring 168'7 7/8" x 168'7 7/8" with each grid of 18'8 7/8" x 18'8 7/8" size. Each classroom is of one module occupying 20 students. All the rooms are accessed from wide corridors open to sky.The openings are wide enough providing sufficient light and ventilation. The central 3 x 3 module called the "Brahmasthan" or the high energy zone is left open to sky with landscaping around it. A meditation hall is placed in the Northeast, principal's room and the administration office in the east with the staff rooms on the west. A library is located on the South - west zone.Toilet blocks are placed seperately on the site away from the main building. A temple for Lord Dakshinamurthi is placed facing South. Water source is placed in the Northeast corner with the distribution from overhead tank.

Koviloor Digital Library



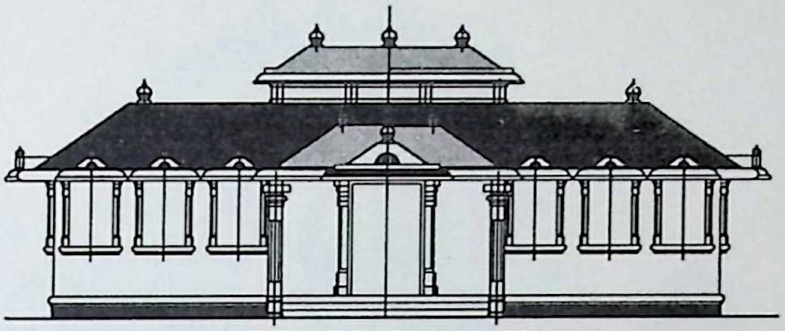
ELEVATION FROM EAST



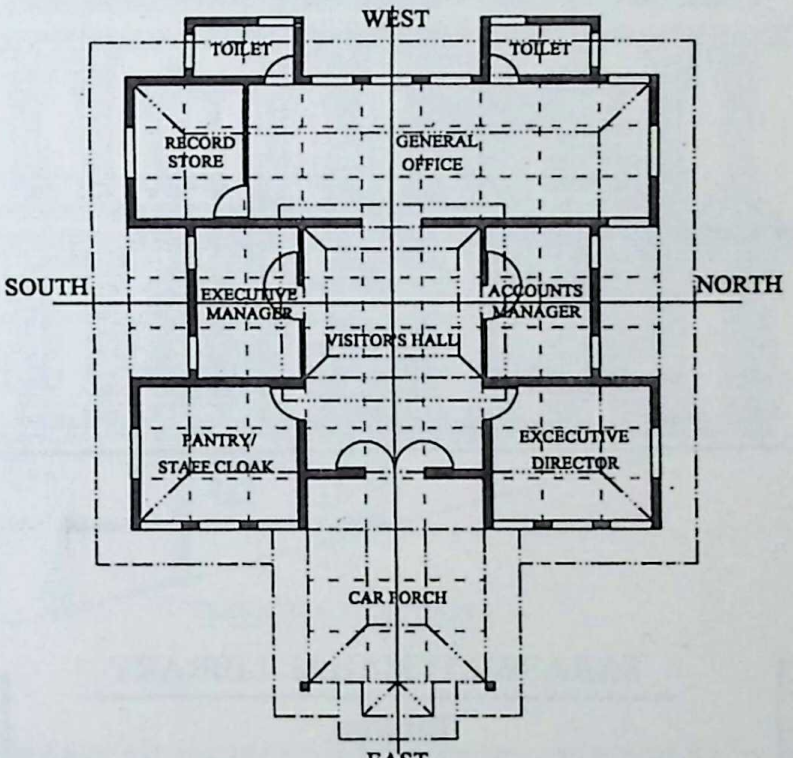
TYPICAL VAASTU RESIDENCE

The design for a residence with the Vaastu principles strictly followed, to achieve maximum perfection, functionally and aesthetically, is seen in this wonderful house of 7000 square feet area. The layout is a basic square plan designed on a 9 x 9 Vaastu Purusha Mandala with one module projected all around, that occupies the various secondary activities. All the other primary activities are allocated in their respective zones within the mother grid. The entrance on East welcomes the early morning sun rays to fill the living hall with bright light. A spacious kitchen on the Southeast is attached to a service area on the South and a dining hall on the West.Three bedrooms are placed on the Southwest, West and Northwest with attached toilets that are extended outside the mother grid. A general store on the North facilitates storage. A study room and puja occupy the North and Northeast zone. The central Brahma - sthan is left vacant and covered on top by a dome with clerestory lighting above. A lavish colonnaded verandah on the Eastern face enhances the beauty of the entrance. The elevation shows the domes placed with respect to the modular layout that creates a perfect symmetry and balance.

Koviloor Digital Library



ELEVATION FROM EAST

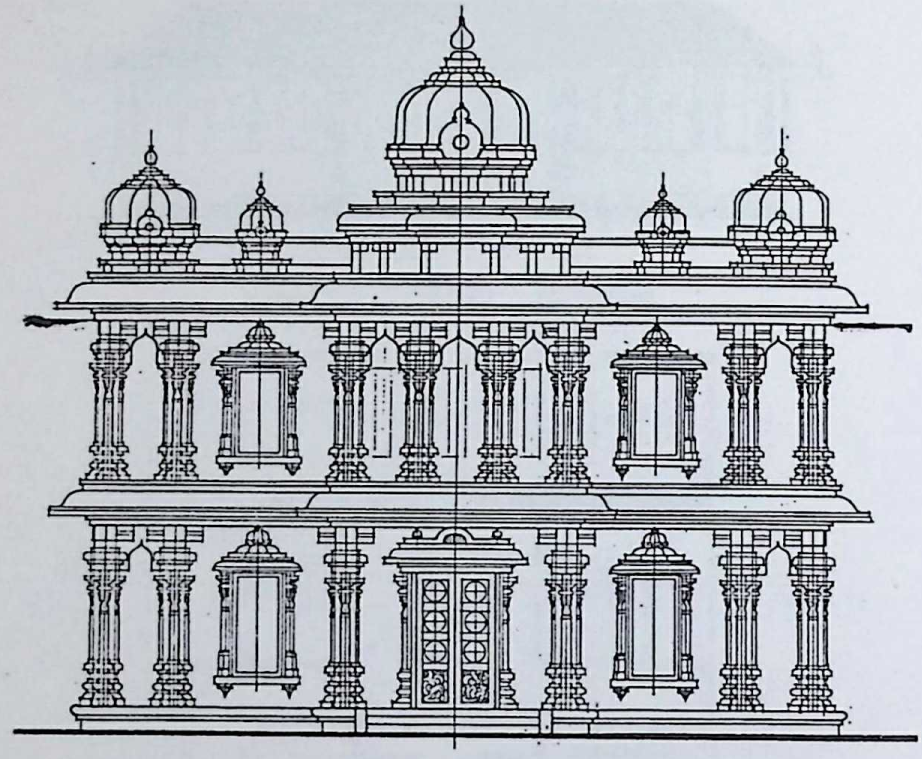


PLAN

OFFICE BUILDING

The above design is a small office building in Nilgiris. This building constitutes the basic requirements located on the Vaastu Purusha Mandala, which is functionally satisfying too. The entrance is from East, where the door is located in the central module which is the right place for public buildings. By doing so the business will flourish and there will be a tremendous growth of the industry. The Brahmasthan is left vacant that is used as a visitor's lounge.The Northeast corner is recommended for the chairperson and the Northern zone for the Accounts Manager. The office and store are placed on the western area. A pantry cum dining is in the Southeast. The recessions are permissible on the cardinal directions alone as shown in this design. The toilets are always placed outside the mother grid or the Vaastu Purusha Mandala to restore the sanctity of a dwelling place whether a residence or any commercial building.

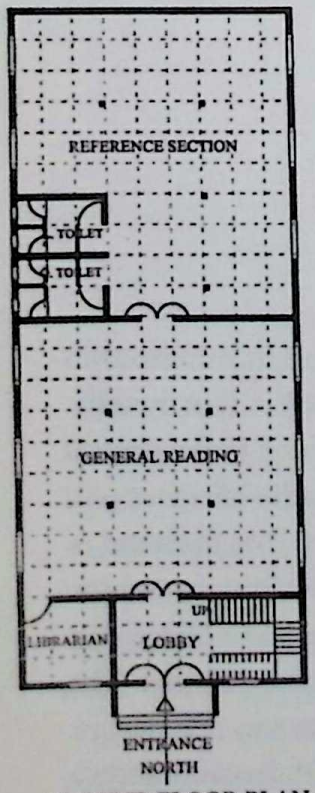
Koviloor Digital Library



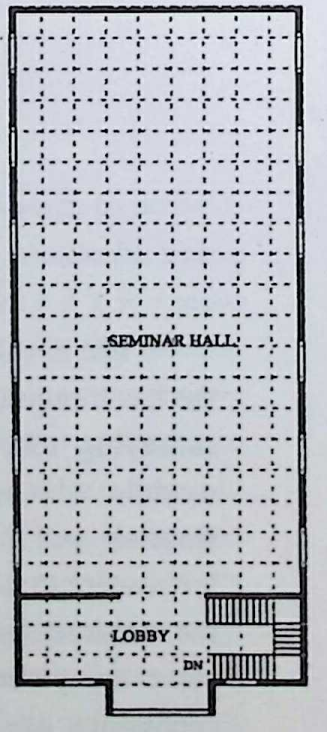
SARASWATI MAHAL LIBRARY

Tanjore.

The Saraswati Mahal Library is famous worldwide for its tremendous collection of a vast range of books covering the entire traditional scientific treatises of ancient India. The library constructed by Maharaj Serfoji at Tanjore, Tamil - Nadu, in Maharashtrian style is almost in ruins and the Government has taken steps to conserve this building. The library building has been redesigned using the architectural elements found in the existing structures, so as to achieve an aesthetic harmony with the surrounding buildings.The arrangement of spaces has due reference to space restrictions, on the eastern side.



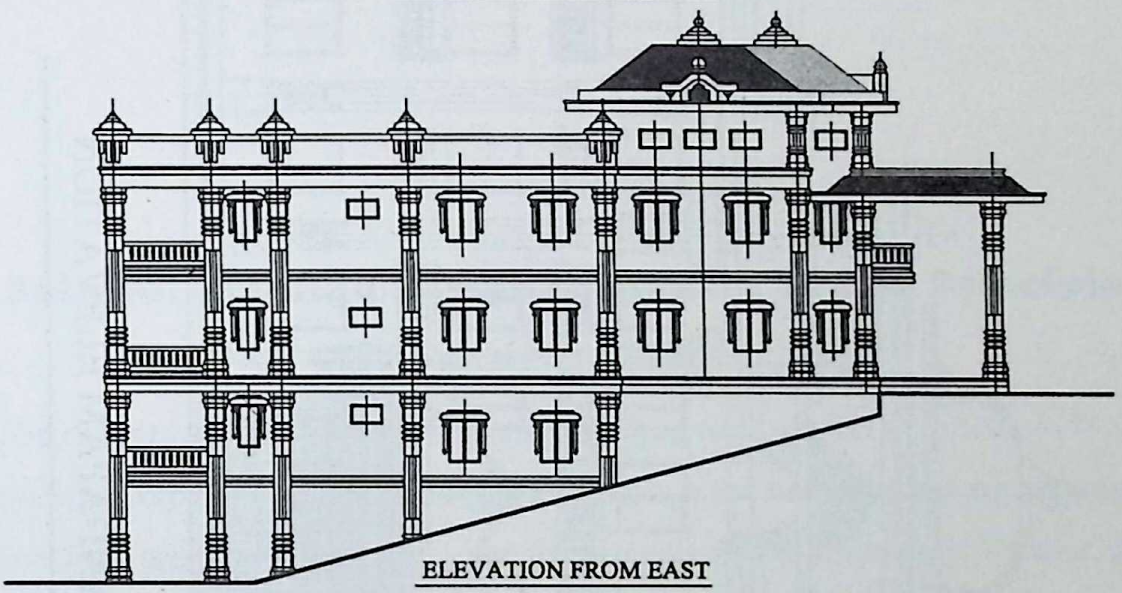
GROUND FLOOR PLAN



FIRST FLOOR PLAN

Koviloor Digital Library

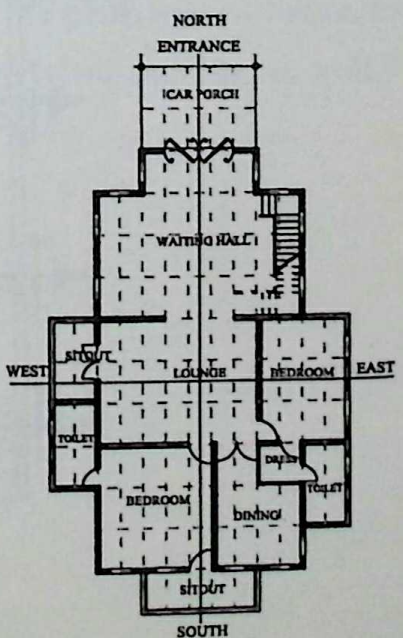
ELEVATION FROM NORTH



ELEVATION FROM EAST

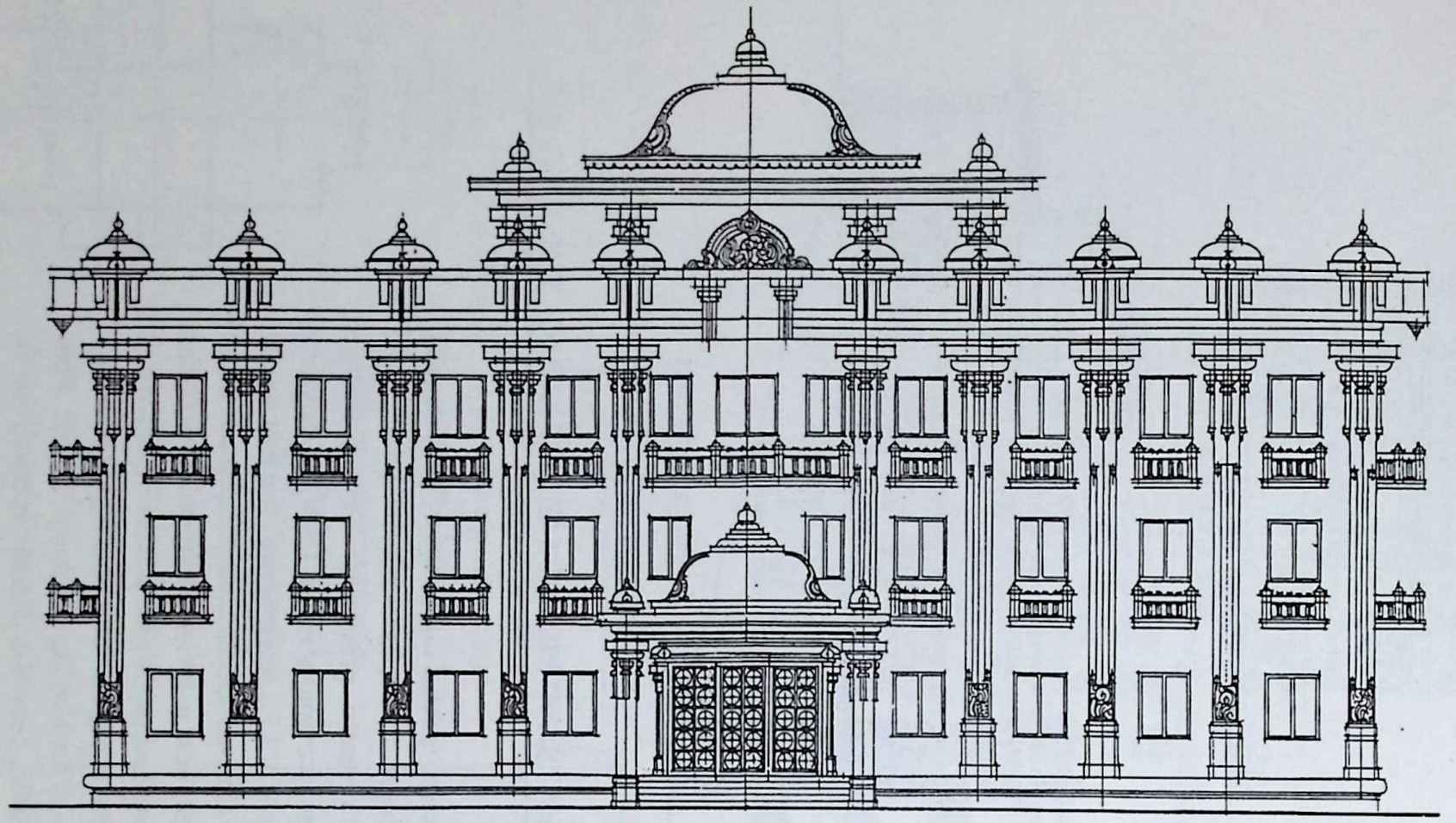
"SRIVATSAM" PILGRIM GUEST HOUSE, TIRUPATI, A.P.

An elegant structure erected on the top of the Tirumala hills amidst the dense forest, is a pilgrim guest house design based on vaastu principles. This Srivatsam Pilgrim guest house previously meant for V.I.Ps has now been designated as V.V.I.P's guest house (the first one of this sort), by the Tirupati Devasthanam.The guest house is entered on North into a lavish lobby with reception facilities. Five double bedrooms with a luxurious suite and common living areas compose this amazing guest house. The natural scenery of the sloping greenery viewed from any of the rooms atop, leaves a pleasant memory for the viewers. The facade of the structure fuses with the pious environment of the Tirumala hills,heightening the spiritual feelings of the guests.



GROUND FLOOR PLAN

Koviloor Digital Library



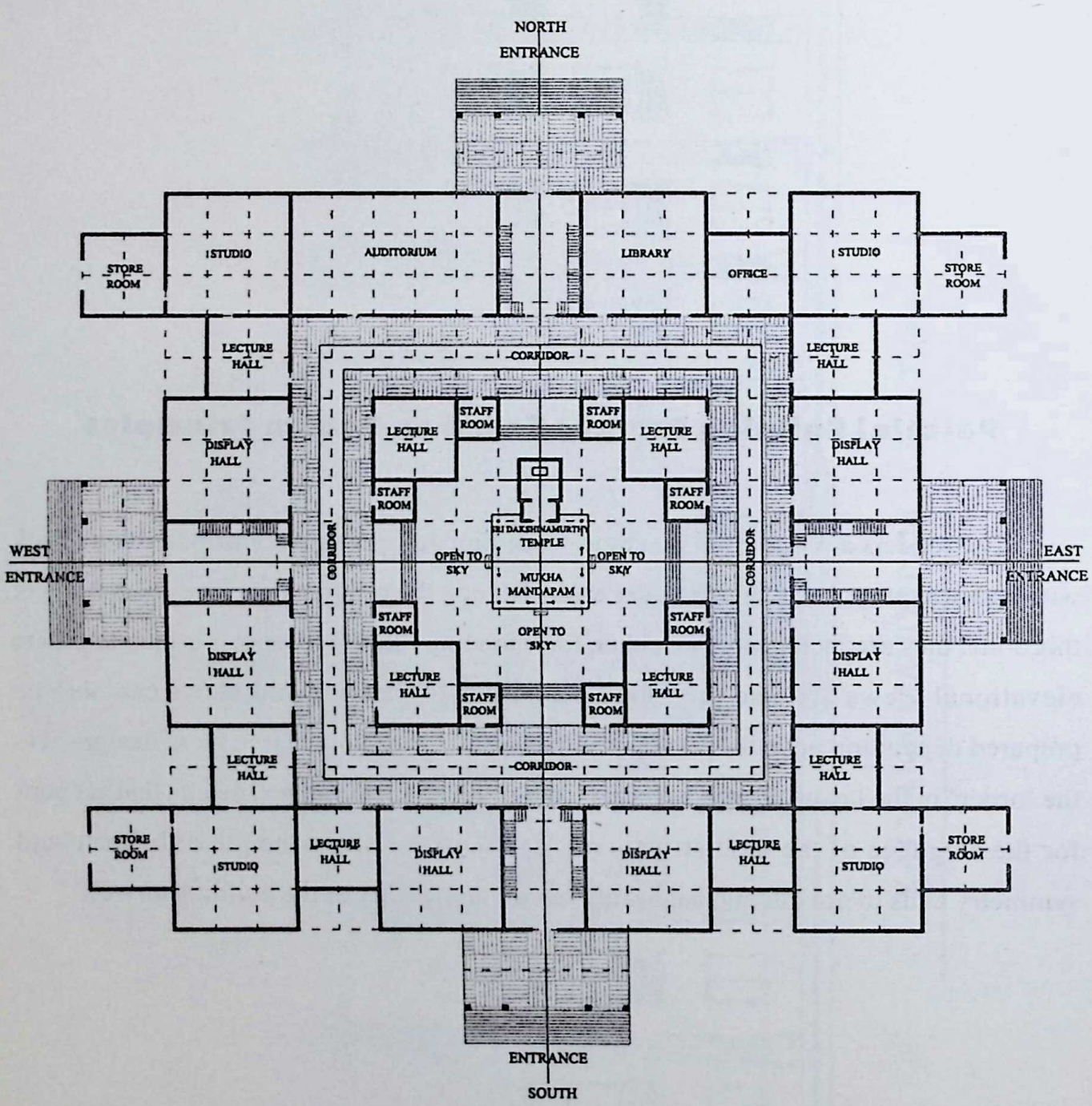
KALYANA MANDAPAM ELEVATION

Koviloor Digital Library

Palatial Building Designs Based on Vaastu Principles

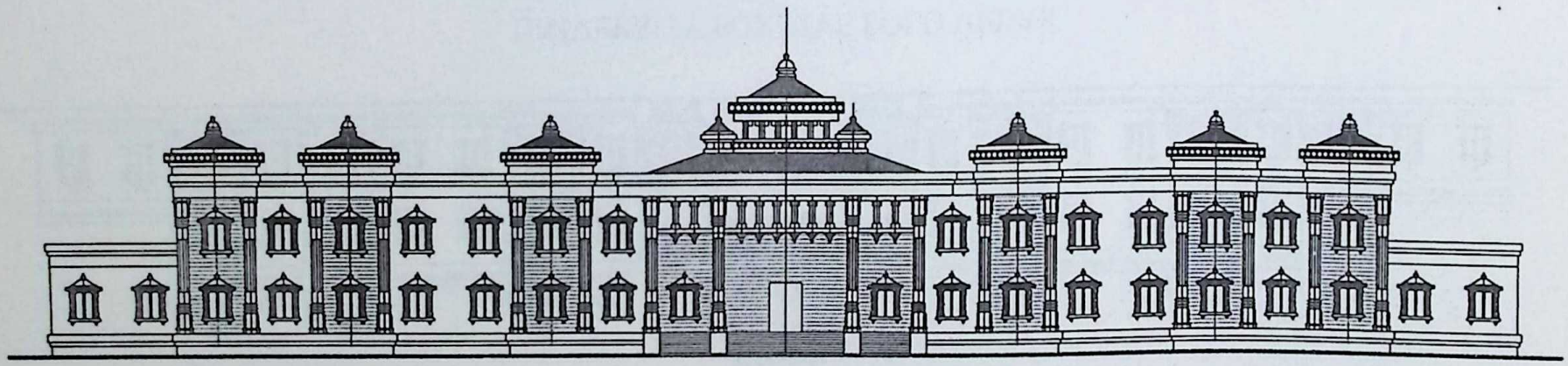
The readers are informed that the succeeding designs were contributed long back with specific purpose indicated under each. Though the time was not ripe enough to get this done, they are included as specimen for intending future sponsors. Further, alternate elevational views are also presented. Hundreds of patterns and views can also be prepared depending upon the layouts and purpose. Please note that in these designs it is the 'order' in the layout as well as 'order' in the elevational form and details that account for the elegance of the total structures. Also note that the principle of balance and symmetry adds to not only visual beauty but to the stability of the building as well.

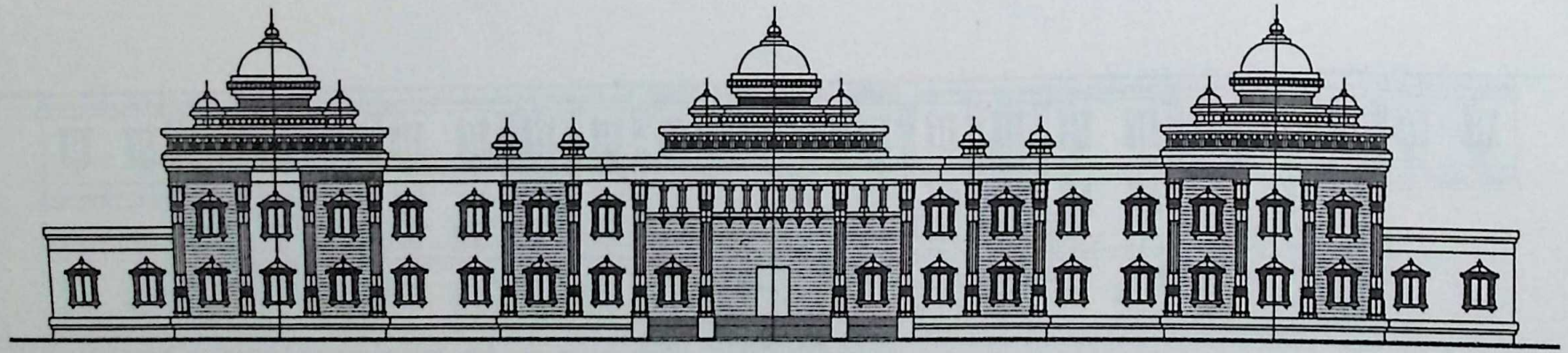
Koviloor Digital Library



UNIVERSITY FOR FIVE FOLD VEDAS

Koviloor Digital Library

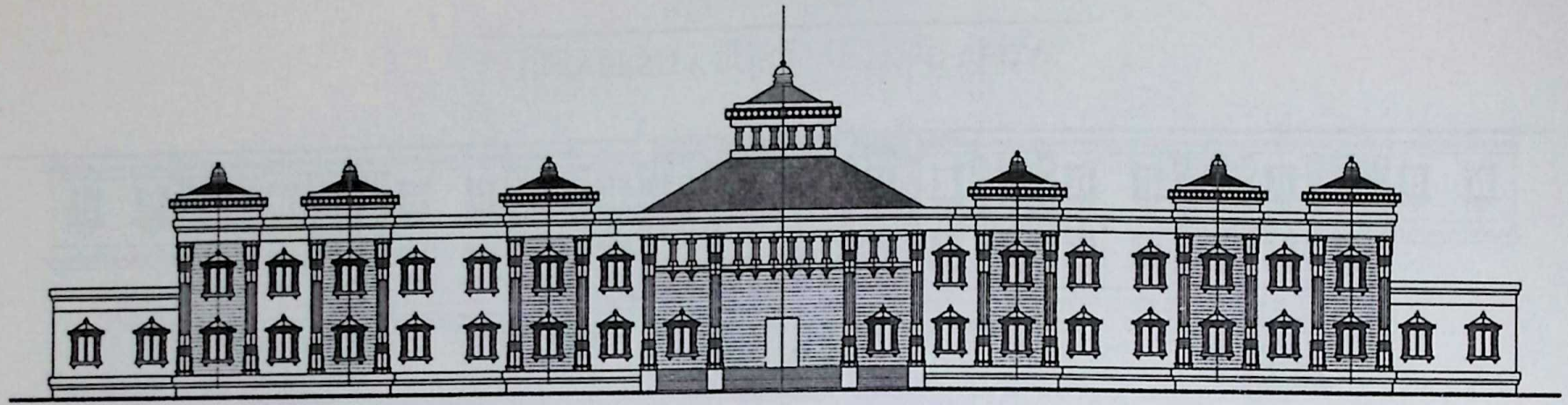


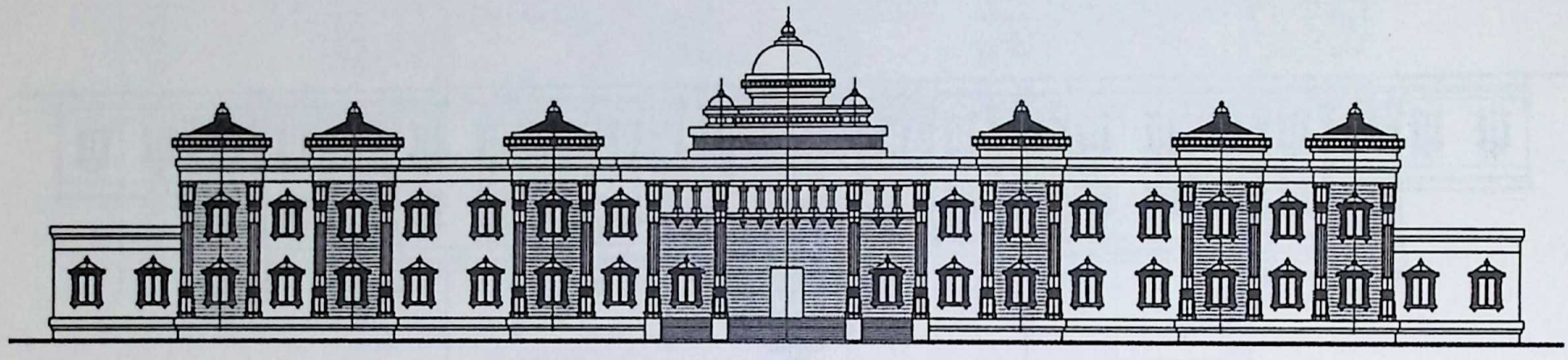


UNIVERSITY FOR FIVE FOLD VEDAS

(Alternative Elevations)

Koviloor Digital Library

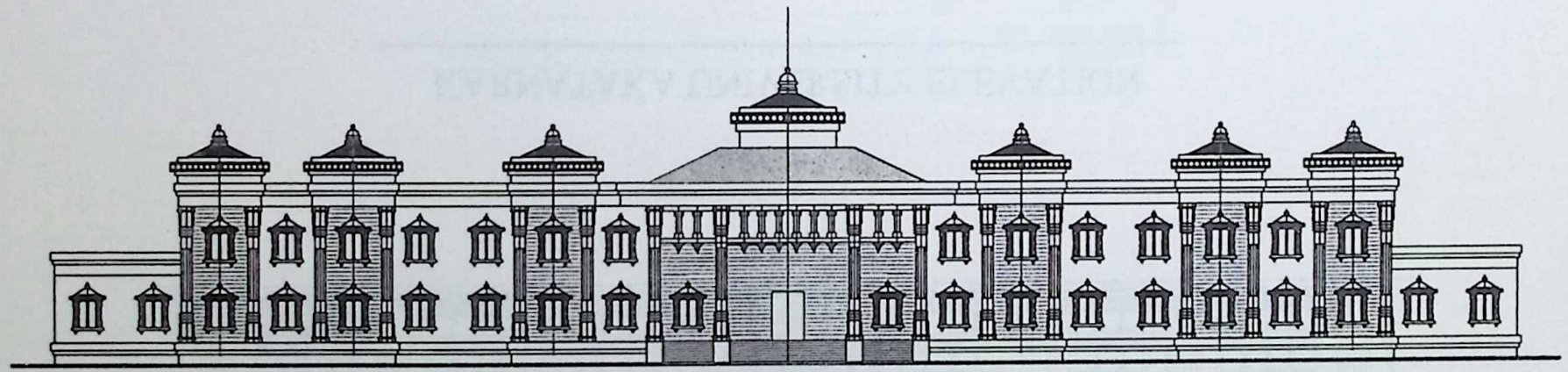


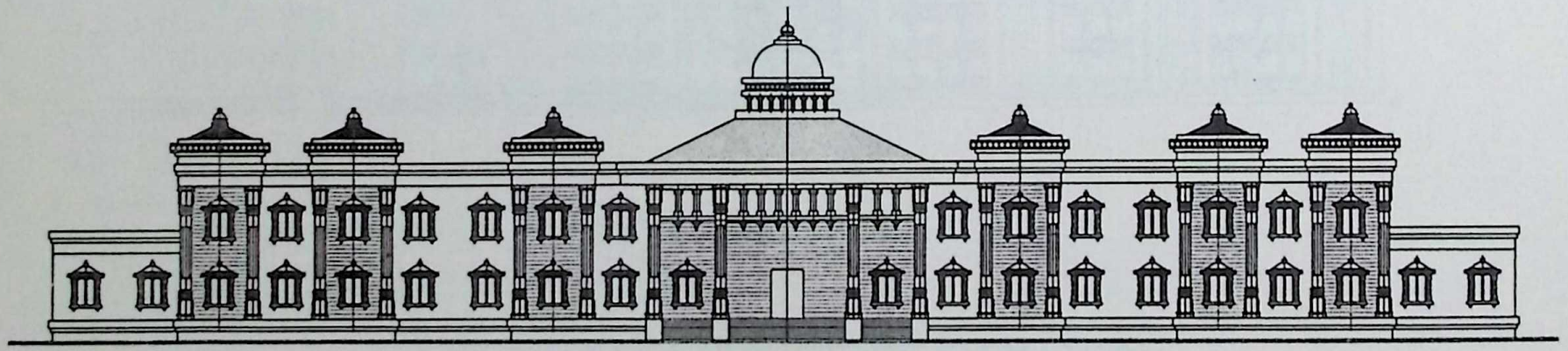


UNIVERSITY FOR FIVE FOLD VEDAS

(Alternative Elevations)

Koviloor Digital Library

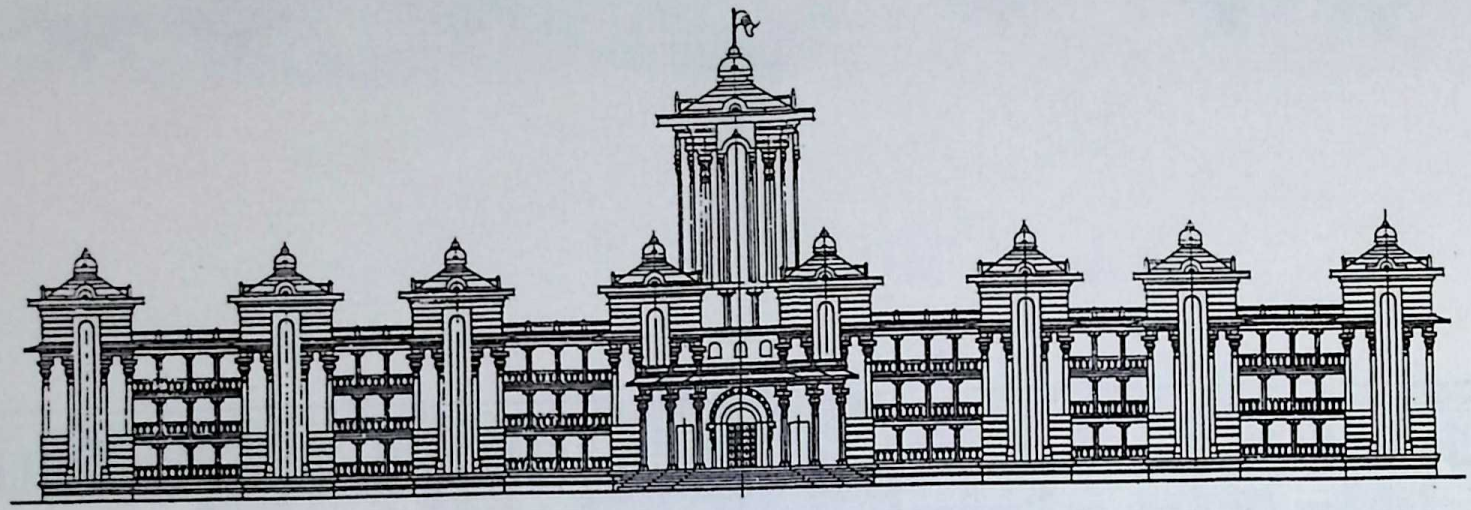




UNIVERSITY FOR FIVE FOLD VEDAS

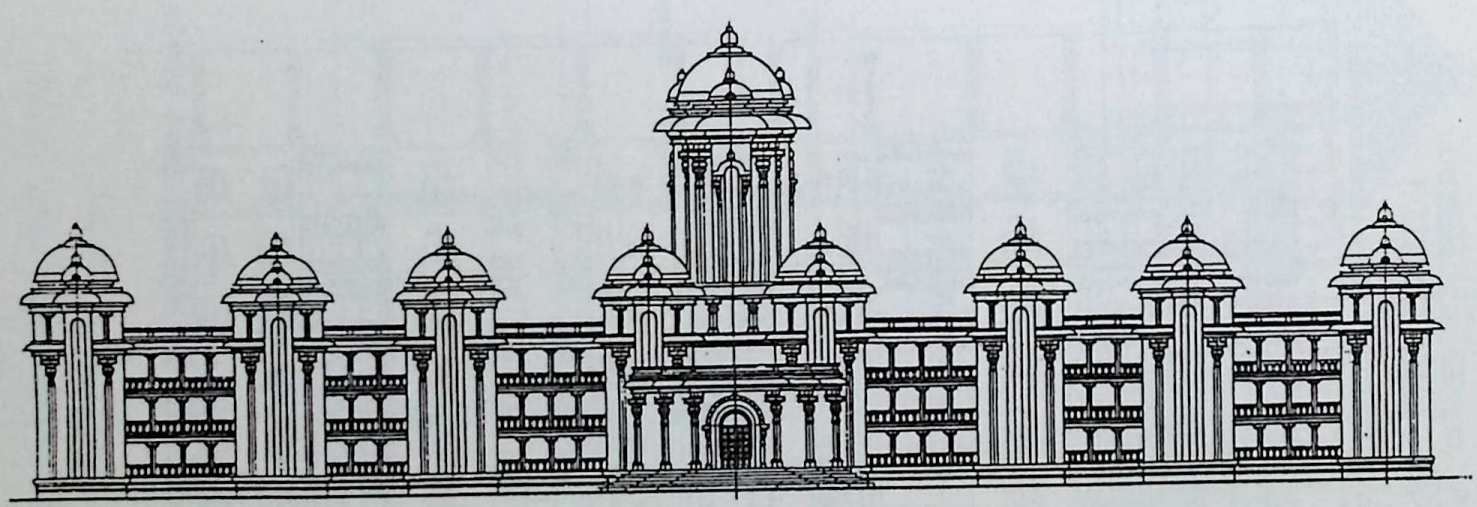
(Alternative Elevations)

Koviloor Digital Library



KARNATAKA UNIVERSITY ELEVATION

Koviloor Digital Library

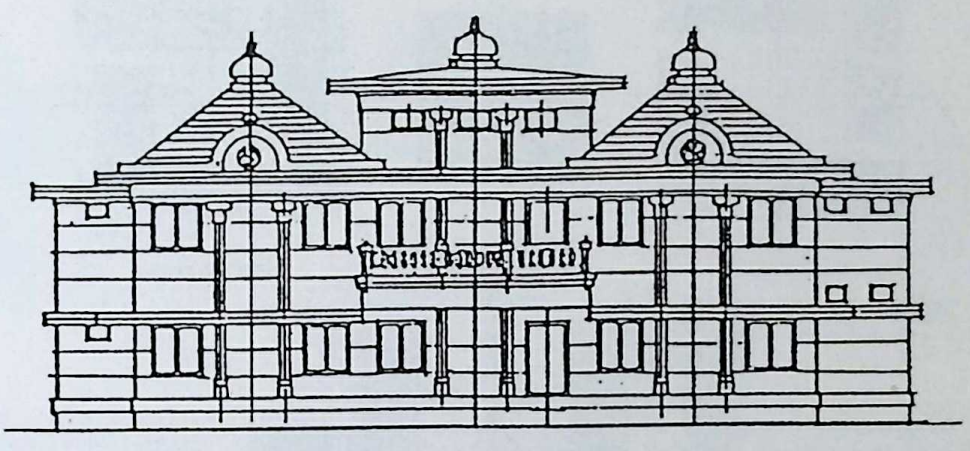


KARNATAKA UNIVERSITY ELEVATION

Koviloor Digital Library

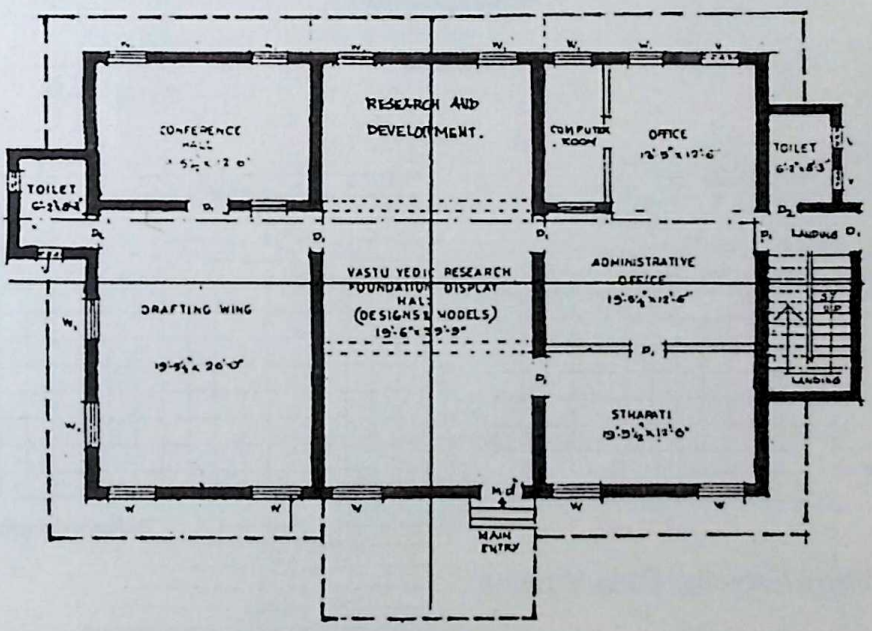
ELEVATION OF FLATS DESIGN

Koviloor Digital Library



Front Elevation

MAYAN MANAI



The above Vaastu Building houses the following

Vaastu Vedic Trust

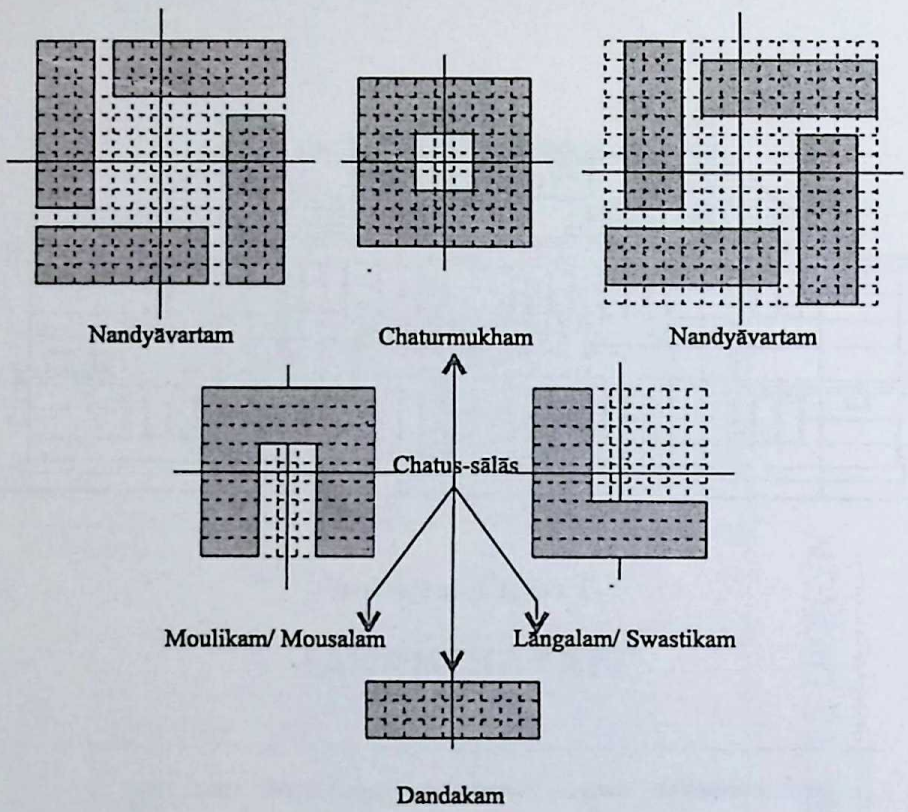
Vaastu Vedic Research Foundation

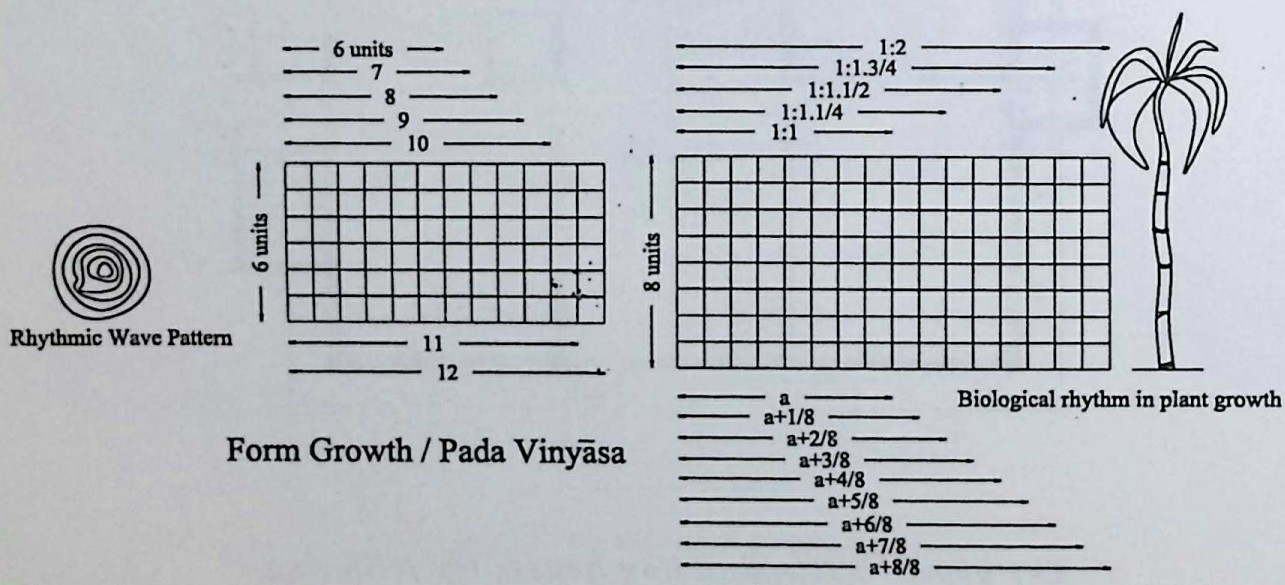
International Institute of Mayonic Science & Technology

V.Ganapati Sthapati & Associates

Vaastu Vedic Designers & Builders

Koviloor Digital Library



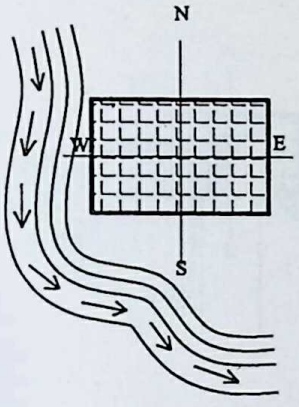


RHYTHMIC EXPANSION OF SPIRITUAL SPACES

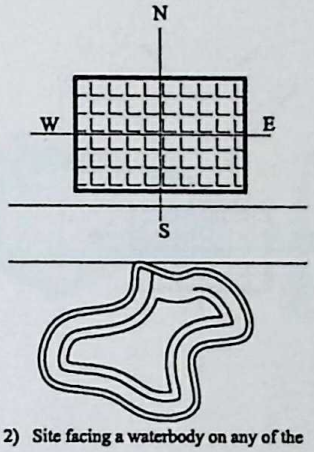
Development of space in rhythms

Koviloor Digital Library

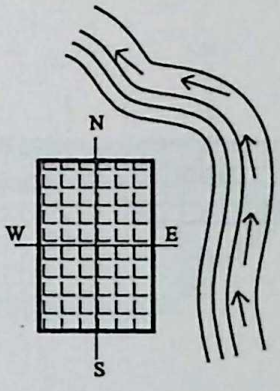
SITE SELECTION



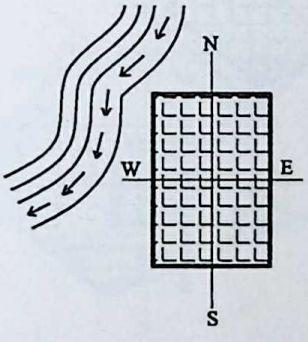
1) Site with river flowing from NW to SE should be avoided



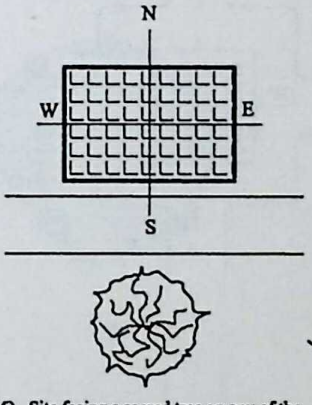
2) Site facing a waterbody on any of the cardinal directions, should be avoided Technical term for this is "Neer Kuttal"



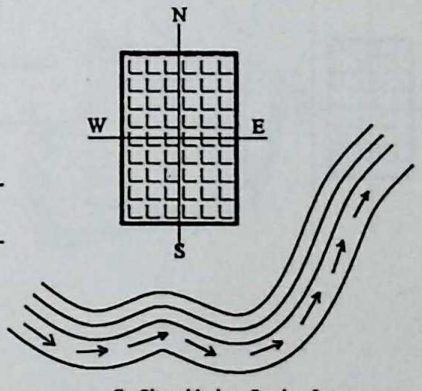
3) Site with river flowing from SE to NE should be avoided, vice-versa is acceptable.



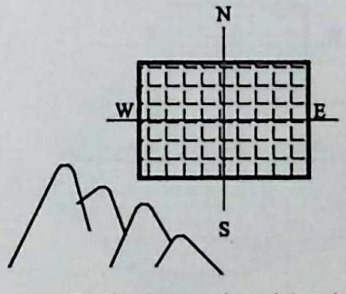
4) Site with river flowing from NW to SW should be avoided



5) Site facing a sacred tree on any of the cardinal directions, should be avoided Technical term for this is "Mara Kuttal"



6) Site with river flowing from SW to SE should be avoided



7) Site with mountaineous belt on the West and South can be utilised.

The above illustrations indicate the various site conditions that have to be considered before buying a plot for construction. The general rule that can be applied in case of site with water bodies any where around is that we can choose those sites which are 1000' 0" away from the water source, irrespective of the direction they are in. In case of mountains that are near a building site, it is good to choose a site with elevated natural contours on the West and South rather than the East and North.

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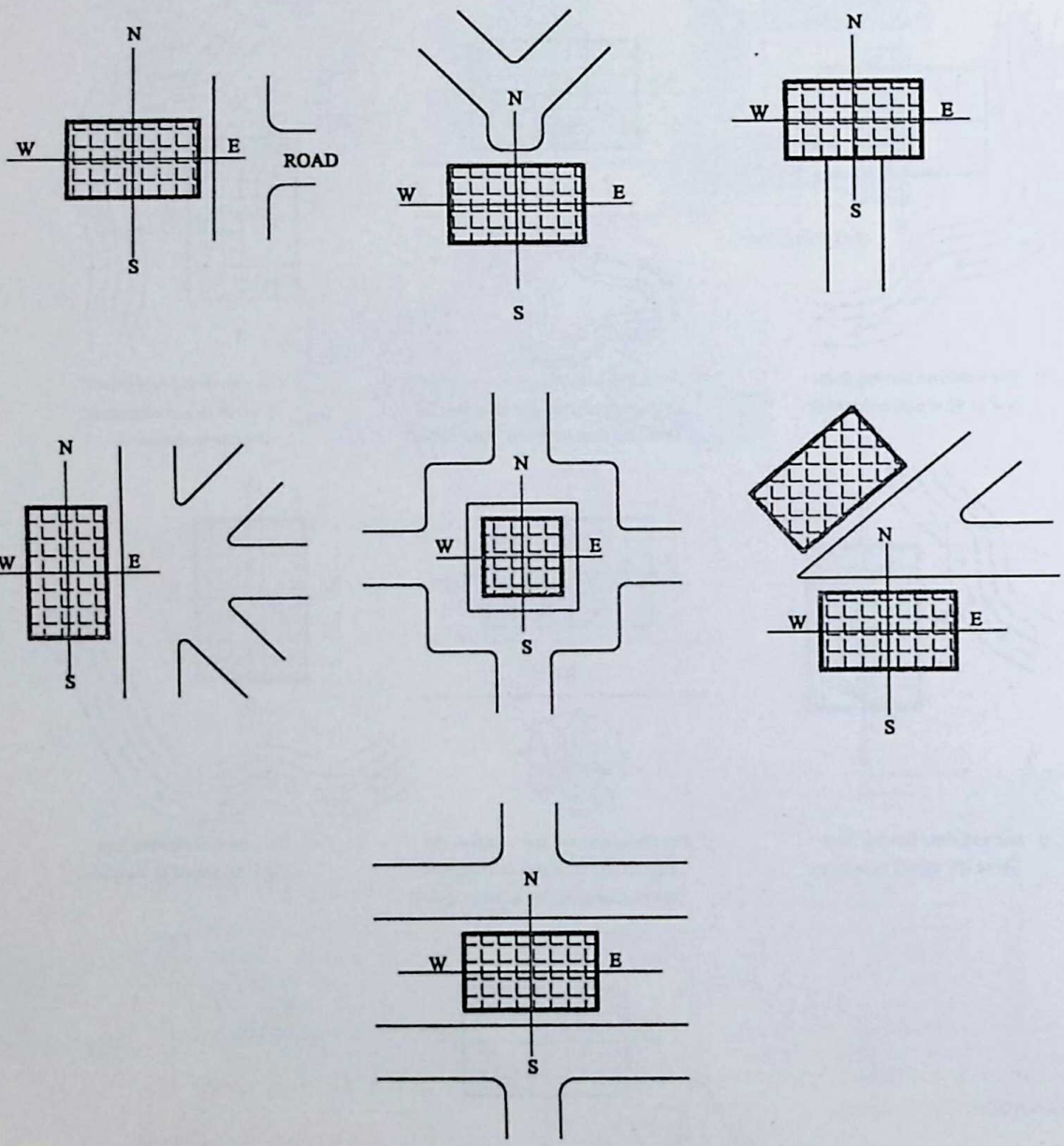
SITE SELECTION



ALL THE SITES ILLUSTRATED ABOVE ARE NOT SUITABLE

FOR RESIDENTIAL PURPOSE

Technical term for this is "Theru Kuttal"

(Note : The street location is applicable for all cardinal directions.)

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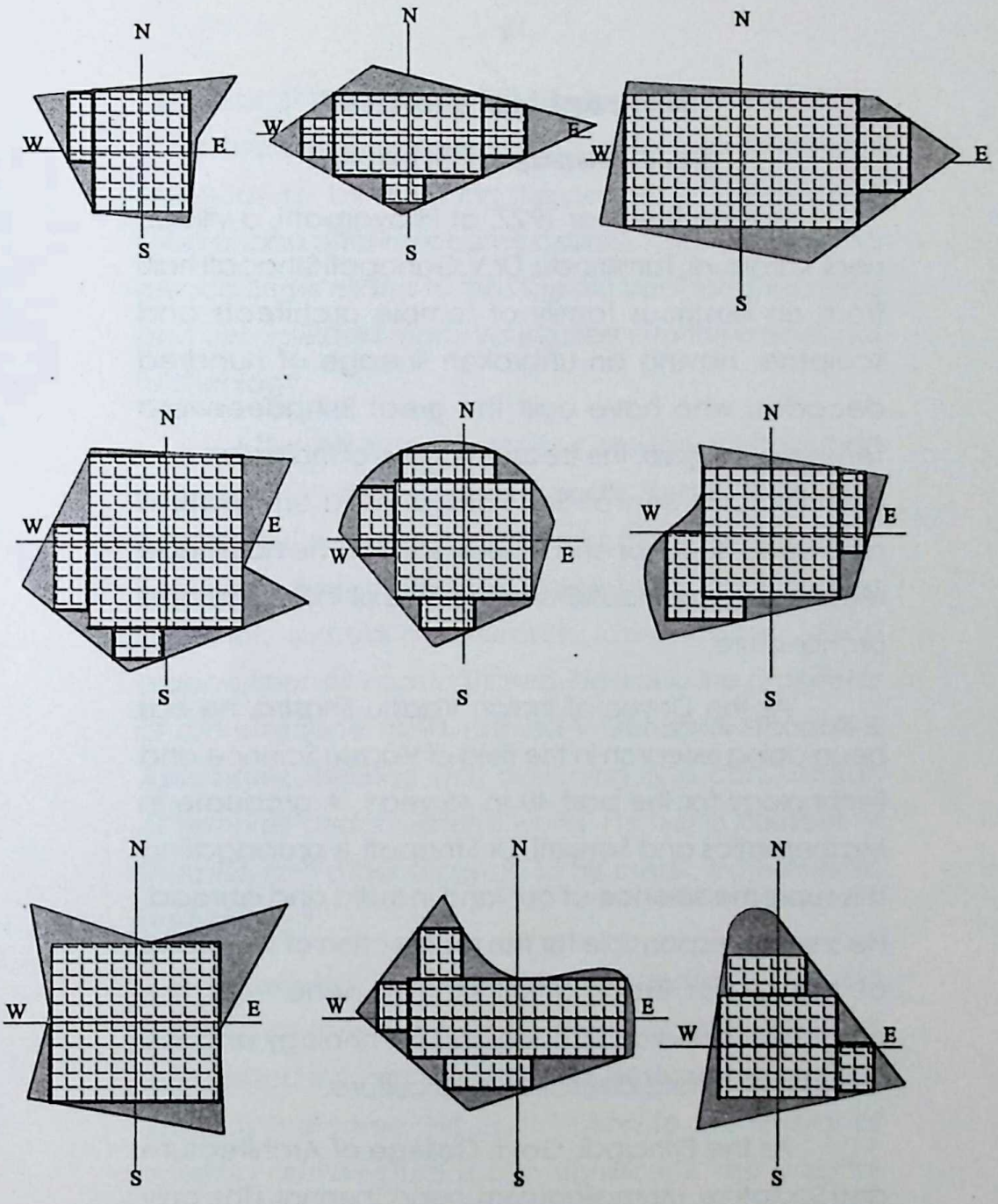
SITE CORRECTION



THE IRREGULAR SHAPED SITES HAVE TO BE CORRECTED WITH RESPECT TO THE ORIENTATION AS ILLUSTRATED ABOVE, BEFORE CONSTRUCTING A BUILDING

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I

Biographical sketch of Dr.V.Ganapati Sthapati

Born in the year 1927, at Pillayarpatti, a village near Karaikudi, Tamilnadu, Dr.V.Ganapati Sthapati hails from an illustrious family of temple architects and sculptors, having an unbroken lineage of hundred decades, who have built the great Brihadeeswara Temple of Tanjore, the treasure-house of Indian art and architecture. Son of Sri. Vaidyanatha Sthapati, a renowned sculptor and Sanskrit scholar, he has made remarkable contributions to the field of Indian art and architecture.

As the Doyen of Indian Vaastu Shastra, he has been doing research in the field of Vaastu Science and Technology for the past 40 to 45 years. A graduate in Mathematics and Sanskrit, Dr.Sthapati is propagating this supreme science of our land in India and abroad. He is solely responsible for the resurrection of the works of the Great Brahmarishi Mayan, who was the progenitor of Indian Science and Technology and the founder of World civilisation and culture.

As the Principal, Govt. College of Architecture and Sculpture, Mamallapuram, near Chennai, (the only institute of this kind in the entire world), for a continuous

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period of 27 years (1961-88), Dr. Sthapati worked hard to restore and elevate the status of the sacred art and architecture, by affiliating the courses to University of Madras and offering degree courses , thereby bringing an academic status to the age old traditional learning and also initiated many youngsters into this traditional technology.

After retirement from Govt. service, he has given form to a Trust, by name **Vaastu Vedic Trust**, and established a research institution called **Vaastu Vedic Research Foundation**, of which he is the Founder Director, aimed at research, development and globalization of Vaastu Shastra. He is also the proprietor of a professional guild, named **V.Ganapati Sthapati & Associates**, dealing with designing and construction of temples and sculptural works. He has a number of temples and other projects, to his credit, both in India and abroad.

Presently, he is on his feet to revive the sacred building architecture along scientific lines and has established the firm **Vaastu Vedic Designers & Builders**, towards the same. His contribution to the revival of building architecture is also significant. The palatial buildings of library and administrative block for Tamil

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University in Tanjore and the Muthiah Mandram in Madurai speak of his capacity for designing and executing works of stependous nature. He has also indianised modern buildings, such as Muthiah Mandram, Rani Seethai Mandram, Kalaignar Arangam, Anna Arivalayam in Chennai. They are appreciated as visual musical forms, a quality attributed to Indian architectural forms. To crown it all, he is the master architect and builder of the world famous statue of Ayyan Thiruvalluvar, the 133' wonder in stone, that has come up off the shore in mid-sea in Kanya Kumari, in the Southern tip of India. This colossal marvel has taken him to the pinnacle of his life's achievement as a traditional architect and builder and commendations and awards are flowing in from across the globe. He has authored a number of books on the science and technology of Vaastu and himself has conducted two International meets, titled **International Seminar on Mayonic Science and Technology** (the science so termed, after its originator Mayan). He has also participated in as many as 70 seminars in India and abroad and presented research papers on the science and technology of Indian origin. In order to cater to the needs of aspirants in Vaastu learning, from India and abroad, Sthapati has also given form to a teaching

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institution by name **International Institute of Mayonic Science and Technology,** which conducts workshops and discourses on Vaastu. He is also holding the post of the **Professor and the Head of the Dept. of Sthapatya Veda, in the World University of Traditional Indian Science Technology and Culture, Chennai.** Some of the notable books he has authored include, **Sirpachennool (Iconometry), ' Temples of Space Science', 'What is a Temple?', 'Some Glimpses of The Science & Technology of Vaastu Shastra- redefined, reinterpreted and illustrated', Commentary on Mayan's 'Aintiram" 'Who Created God?', 'Vaastu Shastra- a scientific treatise, not a religious document' , 'Vaastu Purusha Mandalam'** etc. He is also running a publishing house by name **Dakshinaa Publishing House,** to undertake the Publishing of his research works to popularise and also to preserve the science for generation to come.

He has also earned a number of titles and awards, offered by prestigious institutions and universities, including the Doctorate degree conferred by the **Maharishi Mahesh Yogi Vedic University, Holland** in 1995, Honorary Fellowship by the Indian Institute of Architects in 1993 and the National award for Master

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Craftsmanship from the President of India, in 1973, among others.

Dr.Sthapati has visited U.S.A., U.K., Australia, France, Fiji Islands, Hawaii, Germany, Holland, Singapore, Malaysia and Mexico on profession and research purposes.

The pulsating and vibrant researcher and sculptor in the man has given forth many startling research discoveries on the intricacies of the traditional art and architecture of India and is quite optimistic that one day Vaastu will rule the world. **He has identified the theories of the origin of the Universe and its life forms through his research on the works of Mayan, scaling heights far beyond the mundane world of modern science and technology.**

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The Poetry, the Poet;
The Sculpture, the Sculptor;
THE BOOK, THE AUTHOR

Dr.V.Ganapati Sthapati

India's leading authority on Vaastu Shastra, Dr.V.Ganapati Sthapati is the direct descendant of an illustrious lineage of traditional sculptors and temple architects, belonging to Tamil Nadu, S.India. A graduate in Mathematics and Sanskrit, his untiring research in this field for the past 45 years has brought forth many startling discoveries on the supreme science of Vaastu and on the great works of Brahmarishi Mayan, the progenitor of Vaastu Science and Technology.

As the Principal, Govt. College of Architecture & Sculpture, Mamallapuram (1961 - 1988), Dr.Sthapati left no stone unturned to elevate the status of the traditional art and architecture from crafts level to degree level. After retirement from service, in order to keep his works moving and alive, he has founded a research institution called **Vaastu Vedic Research Foundation**, aimed at research, development and globalisation of Vaastu Shastra. On the professional side, he has formed a guild of Temple architects and sculptors, called **V.Ganapati Sthapati & Associates**, comprising the country's foremost and authentic professionals in the field of Vaastu based architecture. Stressing on the universality and secular nature of Vaastu tradition, Dr.Sthapati has also launched another wing called **Vaastu Vedic Designers & Builders**, wherein the science and technology of Vaastu is applied to buildings - residential and commercial to achieve spiritually and physically invigorating habitation on earth. Apart from this, he is also the editor and publisher of the research journal **"Vaastu Purusha"** and author of other notable works related to the theory and practice of Vaastu Shastra. To cater to the needs of Vaastu aspirants in the cadre of architects and engineers from India and abroad, he has started a teaching institution called **International Institute of Mayonic Science & Technology**, which conducts workshops and discourses on Vaastu.

His dedication and commitment to the revival of the science of Vaastu has earned him innumerable titles and awards, both within India and abroad. To crown it all, the colossal marvel of the world famous statue of Poet Thiruvalluvar, a 133 ft. high masterpiece in granite, designed and constructed by him has elevated him to the pinnacle of his life's achievement as a traditional builder and architect. The grandeur of the temples, memorable monuments and other palatial buildings designed and constructed by him across the Indian subcontinent and the foreign countries of U.S., Singapore, Malaysia, Fiji Islands etc., speak of his versatality and authority on the subject of Vaastu.